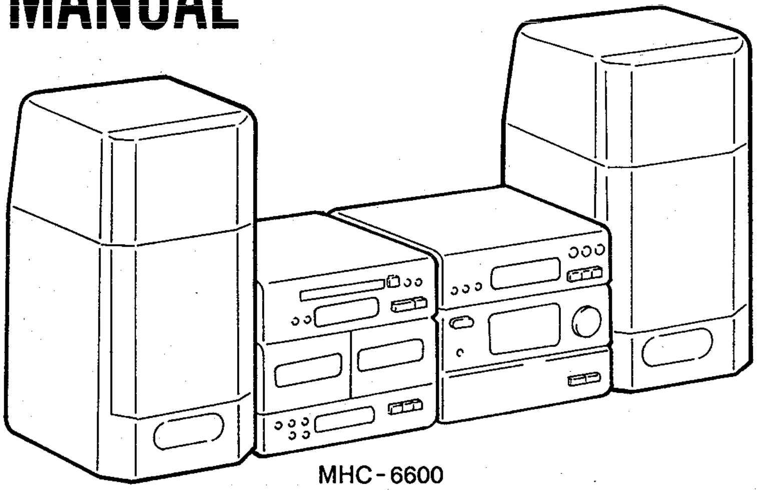
FH-E939CD, MHC-5600/6600

SERVICE MANUAL

AEP Model
UK Model
MHC-5600/6600
E Model
FH-E939CD



MHC-6600

- FH-E939CD and MHC-5600/6600 are composed of the following models. As for the service manual, it is issued for each component models, then please refer to it.

COMPONENT MODEL NAME FOR FH-E939CD and MHC-5600/6600

Component \ System	MHC-5600 FH-E939CD	MHC-6600
Amplifier	TA-H5600	TA-H6600
CD player	CDP-H6600	
Tuner	ST-H6600	
Cassette deck	TC-H5600	TC-H6600
Speaker System	SS-H6600	

NOTE :

G : Germany model
IT : Italian model
EA : Saudi Arabia model

SPECIFICATIONS

Power requirements	AEP, UK, G, IT model : 220-230 V, 50/60 Hz UK model : 240 V, 50 Hz E, EA model : 120 V, 220 V or 240 V AC adjustable, 50/60 Hz
Power consumption	AEP, UK, G, IT model : 150 W UK model : 300 W E, EA model : 150 W
Dimensions	Approx. 225 × 365 × 275 mm (w/h/d) ($8^{7}/_{8} \times 14^{3}/_{8} \times 10^{7}/_{8}$ inches) incl. projecting parts and controls
Weight	MHC-6600 : Approx. 11.5 kg (25 lb 5 oz) MHC-5600/FH-E939CD : Approx. 11.4 kg (25 lb 2 oz)

Design and specification subject to change wihout notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MICROFILM

MINI HI-FI
COMPONENT SYSTEM

SONY®

PARTS LIST

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
	1-465-700-11	REMOTE COMMANDER (RM-S560) (5600, E939CD)	
	1-465-701-11	REMOTE COMMANDER (RM-S660) (6600)	
	1-501-369-11	ANTENNA (FM) (AEP, UK, G, IT)	
	1-501-374-11	ANTENNA, LOOP (AM)	
	1-574-264-11	CORD, LIGHT PLUG	
	⚠1-558-032-11	CORD, POWER (UK)	
	⚠1-575-131-11	CORD, POWER (AEP, G, IT, EA)	
	⚠1-556-280-00	CORD, POWER (E)	
	⚠1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
	⚠1-569-008-11	ADAPTOR, CONVERSION 2P (EA)	
	1-590-870-11	CORD (WITH CONNECTOR) 17P (TA-TC-CD)	
	1-574-927-21	CORD (WITH CONNECTOR) 15P (TA-ST)	
	1-590-855-11	CORD, SPEAKER (E, EA)	

Ref. No.	Part No.	Description	Remarks
	3-753-178-11	MANUAL, INSTRUCTION (AEP, UK, E, EA) (English, French, Spanish, Chinese)	
	3-753-178-41	MANUAL, INSTRUCTION (AEP, G, IT) (German, Dutch, Swedish, Italian, Portugese)	
	4-945-645-01	LID, SLIDE (for RM-S660)	
	4-945-646-01	LID, SLIDE (for RM-S560)	
	4-945-648-01	CASE, BATTERY (for RM-S560/S660)	
	*4-945-071-01	INDIVIDUAL CARTON (TA, TC, CDP) (6600: IT)	
	*4-945-150-01	INDIVIDUAL CARTON (TA, TC, ST, CDP) (5600: AEP, UK)	
	*4-945-152-01	INDIVIDUAL CARTON (TA, TC, CDP) (5600: AEP, G)	
	*4-945-731-01	INDIVIDUAL CARTON (TA, TC, ST, CDP, SS) (E939CD)	
	*4-945-149-01	INDIVIDUAL CARTON (TA, TC, ST, CDP) (6600: AEP, UK)	
	*4-945-407-01	INDIVIDUAL CARTON (TA, TC, CDP) (6600: AEP)	

English
91G1669-1
Printed in Japan
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Published by Customer Relations and Service Group

Sony Corporation
Audio Group

TA-H5600/H6600

SERVICE MANUAL

AEP Model
UK Model

This unit is the Amplifier for the MHC-5600/6600 component system.

Photo is TA-H6600

SPECIFICATIONS

Continuous RMS power output	For satellite speaker: 28 + 28 W (8 chms at 1 kHz, DIN) 33 + 33 W (8 ohms at 1 kHz, 5% THD) For bass speaker: 32 + 32 W (6 ohms at 110 Hz, DIN) 37 + 37 W (6 ohms at 110 Hz, 5% THD)
Music power output	(for AEP and U.K.model) For satellite speaker: 44 + 44 W (8 ohms at 1 kHz, 10% THD) For bass speaker: 48 + 48 W (6 ohm at 110 Hz, 10% THD)
Peak music power output (EXCEPT AEP, UK)	550 W
Inputs	ADAPTOR (pin jacks): sensitivity 260 mV impedance 47 kilohms
Outputs	HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more. ADAPTOR (pin jacks) output level 260 mV impedance 1 kilohms SPEAKER (SATELLITE): accepts speakers of 8 to 16 ohms. SPEAKER (BASS): accepts speakers of 6 to 16 ohms

MICROFILM

STEREO AMPLIFIER

SONY®

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Notes on chip component replacement

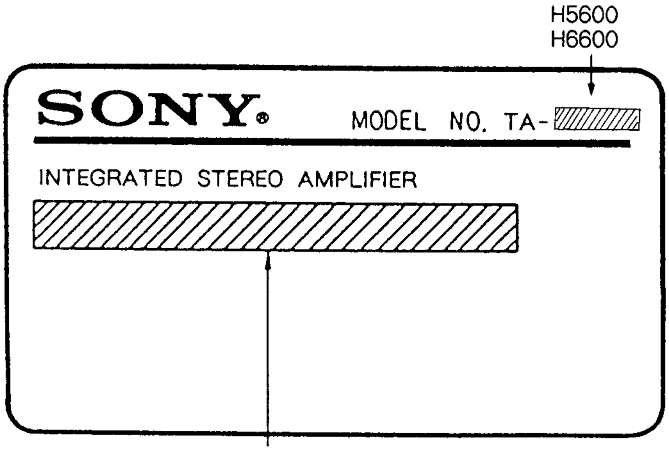
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270℃ during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MODEL IDENTIFICATION

– Specification Label –

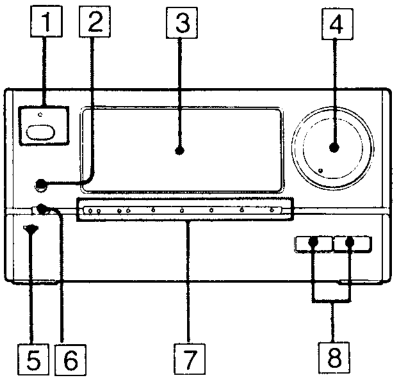


AEP, Germany Model : AC 220V~50/60Hz
Italian Model : AC 220V~50/60Hz
UK Model : AC 240V~50/60Hz

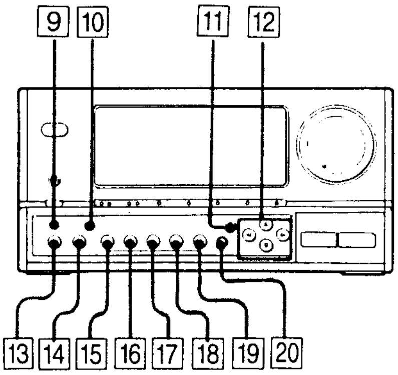
SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATION AND FUNCTION CONTROLS



1 SYSTEM POWER switch and STANDBY indicator
The indicator remains lit as long as the AC power cord is connected to a wall outlet.
2 HEADPHONES jack (stereo minijack)
00
3 Display window
4 VOLUME control ㉘
5 OPEN tab
6 WAKE UP indicator (134)
7 Function indicators X: ⑳ (138)
8 VIDEO and AUDIO FUNCTION selectors ⑳ (138)



9 WAKE UP button (134)
10 DISPLAY button (78)
11 MEMORY button (86)
12 CURSOR CONTROL button
13 DBFB (Dynamic Bass Feedback) button ㉘
14 BALANCE button ㉘
15 DSP button (72)
16 PRESET buttons (74)
17 DYNAMIC SOUND button (84)
18 PARAMETRIC EQUALIZER button (80)
19 PRESENCE SURROUND button (82)
20 ON/OFF button ㉘ (80) (82) (84)

Audio Adjustment

Volume Adjustment A

Turn VOLUME clockwise to increase the sound level, or counterclockwise to decrease it.
(Or press + or – on the remote commander.)

Balance Adjustment B

Adjust the balance of the speakers to correct the stereo imaging when the speaker position is not symmetrical.

1 **Press BALANCE.**

2 **Adjust with CURSOR CONTROL ◄ or ►.**

Reinforcing Bass – DBFB* C

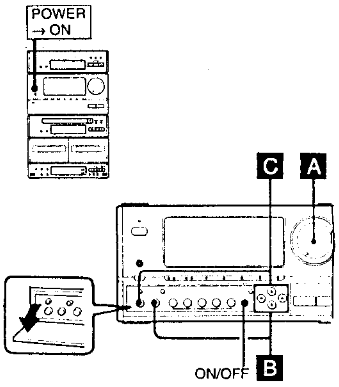
1 **Press DBFB.**

2 **Adjust with CURSOR CONTROL ▲ or ▼.**
The more you press ▲, the more the bass is emphasized.

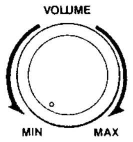
When you do not want to apply the DBFB effect
Press ON/OFF.

*DBFB = Dynamic bass feedback

For personal listening
Connect headphones to HEADPHONES.
No sound comes from the speakers.

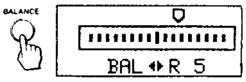


A



B

1



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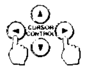
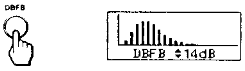


C

1



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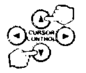


Using the Digital Sound Effects

This unit incorporates a Digital Signal Processing (DSP) system which consists of a Digital Parametric Equalizer, a Digital Presence Surround Processor, and a Digital Dynamic Sound Controller. Using this DSP system, you can get the optimum sound for the kind of music you want to listen to.

Twelve recommended sound field programs (Digital Sound Menu) are preset at the factory for easy use. You can enjoy the digital sound effects by just choosing from the Digital Sound Menu according to the program source.

You can also create a variety of different sounds and effects by adjusting the Digital Sound Menu settings using three different sound manipulation functions.

Making full use of the DSP system allows you to maximize your music listening enjoyment.
You can also store up to six settings you have created in the memory (Personal File).

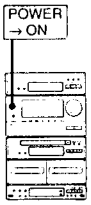
How to get the Digital Sound Effect

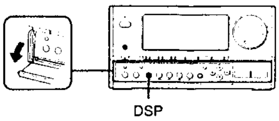
To adjust each of the Digital Sound Effect, you must activate the DSP system first.

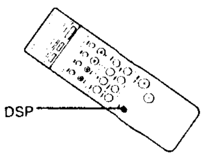
Press DSP.

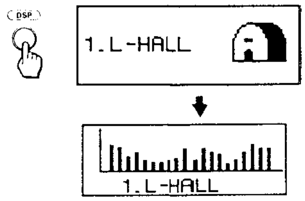
When the DSP is working, one of the 12 Digital Sound Menus (page 74) or one of the six Personal Files (page 86) displays in the display window.

To cancel the DSP effect
Press DSP again.
The Digital Sound Menu or the Personal File disappears and the display shows "EFFECT OFF."









Using the Digital Sound Effects

Enjoying the Digital Sound Menu

When the system is shipped from the factory, 12 specially recommended combinations of settings for the Parametric Equalizer, Presence Surround and Dynamic Sound (Digital Sound Menu) are stored. Since these programs are appropriate for most types of music and listening situations, you can enjoy the digital sound effects by just choosing from the Digital Sound Menu according to the program source.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Press PRESET.**
The display shows a "menu display" (choices) of the Digital Sound Menu.

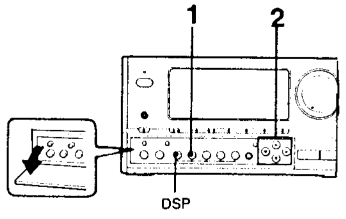
2 **Select the Digital Sound Menu using CURSOR CONTROL and by referring to the table on page 76.**
The selected Digital Sound Menu displays and the sound effect starts two seconds after releasing the CURSOR CONTROL buttons. Then, the display goes back to its normal state (see page 78).

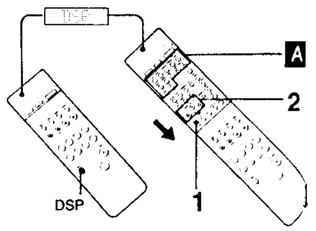
To display the next or previous menu a
Press ▲ or ▼.

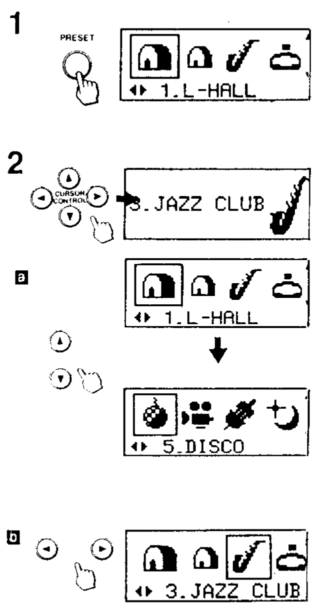
To move the cursor b
Press ◀ or ▶.

To select the Digital Sound Menu directly
(Possible with the remote commander only)

1 Press DSP on the remote commander so that "DSP" appears on the display on the remote commander.
2 Press the numeric button **A** for the desired Digital Sound Menu.



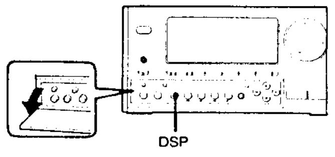




Using the Digital Sound Effects

Display	Applications
1 L-HALL	[1]
2 S-HALL	[2]
3 JAZZ CLUB	[3]
4 STADIUM	[4]
5 DISCO	[5]
6 MOVIE	[6]
7 SYMPHONY	[7]
8 NIGHT	[8]
9 BGM	[9]
10 SIMULATED	[10]
11 WM	[11]
12 CAR	[12]

[1] Gives the atmosphere of a large hall which seats more than 2000 people.
[2] For chamber music or an instrumental solo.
[3] For jazz.
[4] For a live concert in an open-air stadium.
[5] Gives a sound similar to a disco which has hard floors and walls.
[6] For DOLBY surround encoded video programs.
[7] For orchestral music.
[8] For enjoyment of sound at low listening levels.
[9] For background music.
[10] Gives width to a monaural program source.
[11] For recording a tape to be listened to with stereo headphones.
[12] For recording a tape to be listened to in a car.



Using the Digital Sound Effects

Changing the Display

(Not possible with the remote commander)

Each time you press DISPLAY, the display changes in the following order:

a Spectrum analyzer 1
b Spectrum analyzer 2
c Digital Sound Menu Display

Note:
When the DSP system is not on, the display shows "EFFECT OFF" instead of the selected Digital Sound Menu.

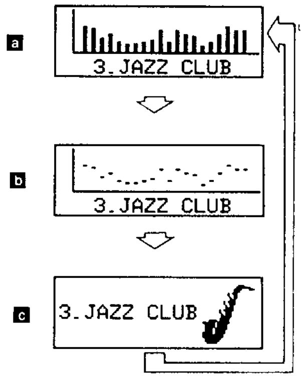
To make the display move with the music A
(Not possible with the remote commander)

You can make the picture in the display move to the rhythm of the music as an animation. The picture moves quickly when the music is fast, slowly when the music is slow, and stops when the music stops. You can enjoy this effect along with any sound effect available with this unit.

Press BALANCE and DISPLAY at the same time.

The picture that represents the selected Digital Sound Menu starts moving. Each Digital Sound Menu has a different picture for this effect.
The illustration **A** shows an example of this effect when the Digital Sound Menu "CAR" is selected. There is also a picture for when the DSP system is not active.

To exit this mode
Press DISPLAY.



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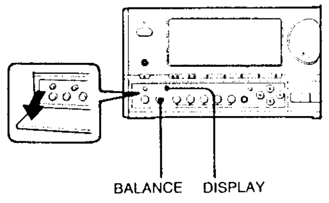
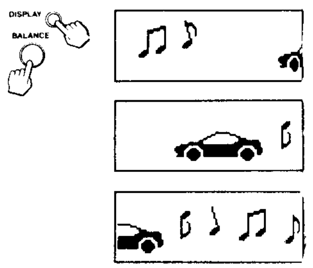




Using the Digital Sound Effects

Using the Digital Parametric Equalizer

This function allows you to adjust the sound by raising and lowering the levels of specific frequency ranges.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Select the Digital Sound Menu (See page 74.)**

2 **Select the frequency range you wish to adjust by pressing PARAMETRIC EQUALIZER. (P.EQ on the remote commander)**
Each time you press it, the frequency range in the Equalizer display changes as follows:
PEQ 1 → PEQ 2 → PEQ 3

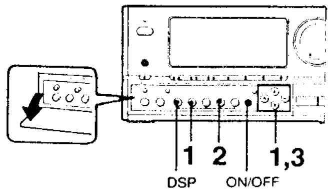
Display	Frequencyr ange
PEQ 1	Low range
PEQ 2	Middle range
PEQ 3	High range

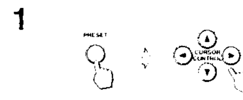
When the unit is shipped from the factory, each of the three frequency positions is defined for a specific frequency range as shown in the above table.
The adjustable frequency range can be freely moved from left to right (low ↔ high) along the frequency scale as explained in the next step. This allows each of the frequencies (PEQ 1 – 3) to be used for any frequency range. For example, PEQ 1 does not have to be used to adjust a low-frequency range, but can be used instead to adjust a mid- or high-frequency range by moving it to the right along the scale.

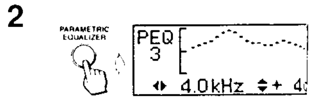
3 **Adjust the sound using CURSOR CONTROL.**
a ◀ or ▶: Shifts the frequency range to be adjusted to the left or to the right.
b ▲ or ▼: Raises or lowers the level of the frequency range centering around the flashing dot.

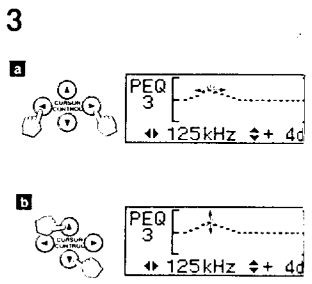
4 **If you wish to adjust the level of another frequency range, repeat steps 2 and 3.**
The "Equalizer display" disappears about 10 seconds after you adjust the sound.

Confirming the effect of the adjustment
Display the "Equalizer display" by pressing PARAMETRIC EQUALIZER and then press ON/OFF.
"±0 dB" displays and the equalizer curve becomes flat.
Each time you press ON/OFF, the sound switches back and forth between the adjusted settings and a flat curve, allowing you to hear and compare the difference.









Using the Digital Sound Effects

Using the Digital Presence Surround Effects

The surround function allows you to adjust the length of the reverberation time and the level of the reverberated sound, putting you in control of a wide range of effects and sounds.
The surround effect adjustments should usually be set to match the size of the envisaged concert hall.
When you want to create the atmosphere of a small hall such as a live house or club, shorten the reverberation time.
When you want to create the atmosphere of a large hall such as a concert hall, lengthen the reverberation time.
If you want to add the feeling of being in a "live" hall where there is a lot of echo, increase the level (strength) of the reverberated sound. If you want to add the feeling of being in a "dead" hall where there is little echo, decrease the level of the reverberated sound.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Select the Digital Sound Menu. (See page 74.)**

2 **Press PRESENCE SURROUND. (SURROUND on the remote commander)**
The "Surround display" appears.

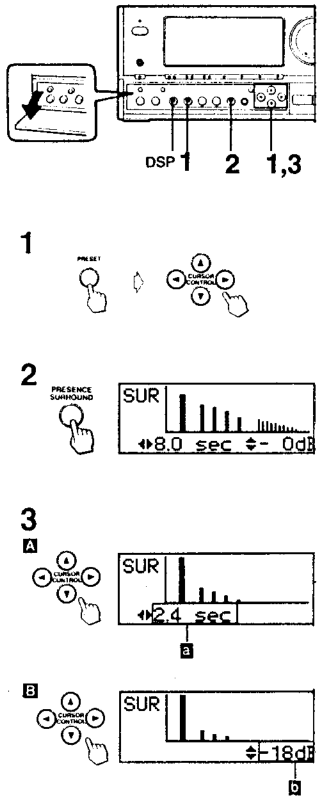
3 **Adjust the sound using CURSOR CONTROL.**

A **To change the reverberation time (a)**
To shorten the reverberation time, press ◀.
To lengthen the reverberation time, press ▶.

B **To change the level of the reverberated sound (b)**
To increase the level, press ▲.
To decrease the level, press ▼.

The "Surround display" disappears about 10 seconds after you adjust the sound.

Confirming the effect of the adjustment
Display the "Surround display" by pressing PRESENCE SURROUND and then press ON/OFF. "-- -- dB" displays.
Each time you press ON/OFF, the sound switches back and forth between the adjusted settings and no surround effect, allowing you to hear and compare the difference.



Using the Digital Sound Effects

Adjusting the Digital Dynamic Sound Controller

This unit allows you to select either of the two Dynamic Controls, Compressor (CP) or Noise Gate (NG).
The compressor compresses the dynamic range of the output signal to increase the average output level without distortion.
This function is useful for obtaining dynamic sound at a small output level or when recording,a program source with a wide dynamic range, such as a compact disc or a cassette tape.
On the other hand, the Noise Gate limits the dynamic range of the input signal to eliminate undesired noise between tunes, etc.
You can set the Compressor or Noise Gate effect in seven increments: "CP.1" to "CP.4" , "NG.1" to "NG.3".
The higher the number selected, the stronger the effect.
When the dynamic sound controller is set to "NORM," there is no special effect.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

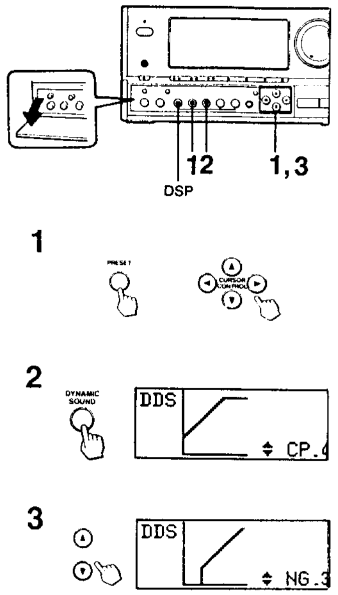
1 **Select the Digital Sound Menu. (See page 74.)**

2 **Press DYNAMIC SOUND. (DDS on the remote commander)**
The "Dynamic Sound display" appears.

3 **Select the Compressor or Noise Gate using CURSOR CONTROL.**

The "Dynamic Sound display" disappears about 10 seconds after adjusting the sound.

Confirming the effect of the adjustment
Display the "Dynamic Sound display" by pressing DYNAMIC SOUND and then press ON/OFF. "NORM" displays.
Each time you press ON/OFF, the sound switches back and forth between the adjusted settings and no Dynamic Sound effect, allowing you to hear and compare the difference.



Storing the Volume Setting for Timer-Activated Operation Wake Up Volume

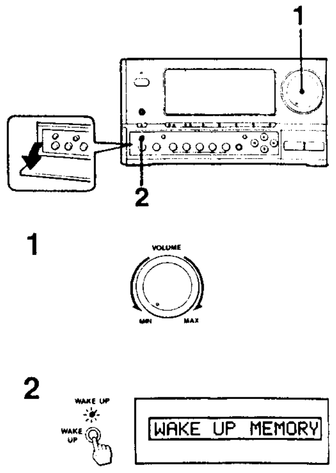
The volume setting is called up automatically when the power is turned on for timer-activated operation (page 128). This is convenient for when you want to wake up to music, etc. You can also use the Sleep Timer function (page 136) together with this function to listen to music in a low volume when you go to sleep, and in a high volume when you wake up.

1 **Adjust the VOLUME.**

2 **Keep WAKE UP depressed until "WAKE UP MEMORY" appears on the display.**
The WAKE UP indicator lights up.

When you do not want to use the Wake Up Volume
Press WAKE UP so that the WAKE UP indicator goes off.

To activate the Wake Up Volume again
Press WAKE UP again.



Using the Digital Sound Effects

Storing Your Individual Sound Effect Settings – Personal File

By storing your individual sound effect settings in the Personal File, you can easily call up the settings at any desired time. You can store up to six combinations of settings.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Obtain the desired sound effect. (See page 80, 82, 84)**

2 **Press MEMORY.**
"MEMORY menu display" (MEMORY and the letters A to F) appear on the display.

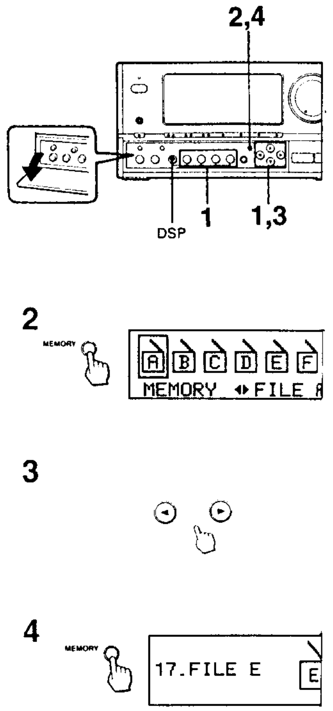
3 **Select a letter (A through F) using CURSOR CONTROL.**

4 **Press MEMORY while the "MEMORY menu display" is displayed.**

The Equalizer Curve, Presence Surround and Dynamic Sound settings are saved under the selected letter. The selected Personal File name appears on the display. The settings previously stored at this memory location are erased and replaced by the new settings.

If you do not press MEMORY in step 4
The "MEMORY menu display" disappears after about 10 seconds. The adjusted sound effect settings is not saved.

If you do not save the sound effect that you obtained
When you press PRESET, the sound effect settings are canceled and the sound goes back to the factory-set effect. Store your individual settings before operating other buttons.



Calling up settings from Personal File

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Press PRESET.**
The "menu display" of the Digital Sound Menu appears.

2 **Select the Personal File with CURSOR CONTROL.**

To display the Personal File menu
Press ▲ or ▼.

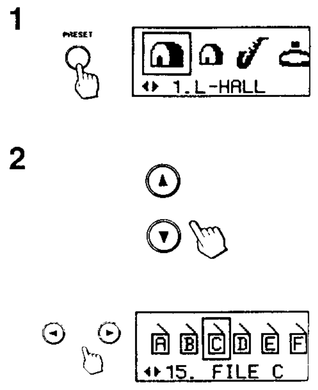
To select the desired Personal File
Press ◀ or ▶.

The selected Personal File displays and the sound effect starts two seconds after releasing the CURSOR CONTROL buttons. Then, the display goes back to its normal state (see page 78.)

To select the Personal File directly (Possible with the remote commander only)

1 Press DSP on the remote commander so that "DSP" appears on the display on the remote commander.
2 Press >12 and the numeric buttons.

Personal File A: >12 and 1
Personal File B: >12 and 2
Personal File C: >12 and 3
Personal File D: >12 and 4
Personal File E: >12 and 5
Personal File F: >12 and 6



Sleep Timer Operation

By setting the sleep timer, the system power can be turned off after the preset duration (up to 90 minutes).
This operation is possible only with the remote commander.

1 **Play the desired program source.**

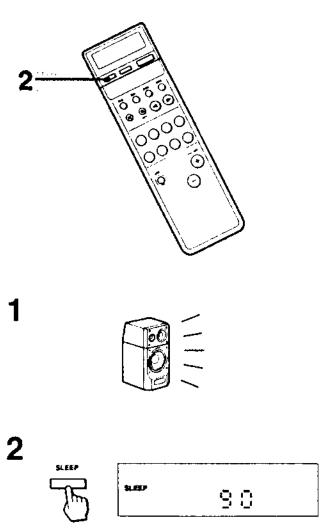
2 **Press SLEEP to selèct the desired duration in minute.**
As you press SLEEP, the indication changes as follows:
90 → 80 → .... → 10 → ---

To turn off the system before the system is turned off by the sleep timer

Press SYSTEM POWER.

To check the remaining time before the sleep timer turns off the system

Press SLEEP once, and the remaining time appears. The display returns to the previous indication automatically after several seconds.



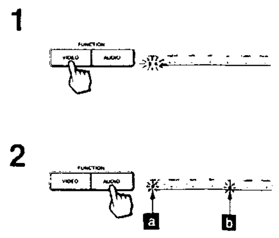
Editing the Sound with a Video Equipment

When you connect a video equipment with this system, you can edit the sound of the audio equipment with the picture of the video equipment.

1 **Press FUNCTION VIDEO (VIDEO 1 or VIDEO 2 on the remote commander) to select the video source.**
The green and red lamps of the program function indicators light up.

2 **Press FUNCTION AUDIO (TUNER, CD, TAPE or TAPE A/B, DAT or PHONO on the remote commander) to select the audio source.**
The green lamp of the video source (a) stays on and the red lamp goes off. The red lamp of the audio source (b) lights up.

The sound of selected the audio source is mixed with the picture of the selected video source.



SECTION 2
DIAGRAMS

2-1. IC PIN DESCRIPTION

- IC101 Dual VCA IC for HiFi Electronic Volume (M5283P)

Pin No.	Name	Mark	Description
1	CH1 side (+) power supply	(+) Vcc	CH1 side power supply terminal
2	CH1 control terminal	Vc1	Controls the signal for ch1 side. Controls the signal by giving 0~5v of the voltage to this terminal. Requires approx. 30nA (standard) as bias current.
3	CH1 output terminal	OUT1	CH1 side output terminal
4 5	(-) power supply terminal	(−) Vcc	Terminals 4, 5, 12, 13 are connected internally.
6	CH1 grounding terminal	GND1	CH1 side grounding terminal (GND)
7	Not connected	NC	Condition is OPEN.
8	CH1 input terminal	IN1	CH1 side input terminal approx. 47K of resistance is inserted for DC bias between GND and this terminal (terminal 8).
9	CH2 input terminal	IN2	CH2 side input terminal approx. 47K of resistance is inserted for DC bias between GND and this terminal (terminal 9).
10	Not connected	NC	Condition is OPEN.
11	Grounding terminal	GND2	CH2 side grounding terminal (GND)
12 13	(-) power supply terminal	(−) Vcc	Terminals 4, 5, 12, 13 are connected internally.
14	CH2 input terminal	OUT2	CH2 side output terminal
15	CH2 control terminal	Vc2	Controls the signal for ch2 side. Controls the signal by giving 0~5v of the voltage to this terminal. Requires approx. 30nA (standard) as bias current.
16	CH2 side (+) power supply	(+) Vcc	CH2 side power supply terminal

- IC111 Digital Signal Operation for Audio (CXD2701Q)

Digital signal operation for 2 channel audio "LSI" which excutes reverberation function and equalizer function in **1** chip.

Pin No.	Pin Name	I/O	Description
1	IMODE	I	Input data format setting terminal Data position changes with "H", "L".
2	IDIR	I	Input data format setting terminal MSB first with "H", LSB first with "L".
3	DATAI	I	Serial data input terminal with 1 sampling, 2 channels. Data format is the complement of 2.
4	BCKI	I	Serial bit clock input terminal for serial input data.
5	LRCKI	I	Serial I/O sampling frequency clock input terminal. L-ch data is transferred with level "H", R-ch data is transferred with level "L".
6	Vss 1	—	GND terminal
7	DATAO	O	Serial data output terminal. Data format is the complement of 2.
8	BCKO	O	Bit clock output terminal. 64 slots.
9	LRCKO	O	Serial data sampling frequency clock output terminal
10	BS1	I	Output data, bit numbers setting terminal BS2 = H, BS1 = H 24bit BS2 = H, BS1 = L 20bit BS2 = L, BS1 = H 18bit BS2 = L, BS1 = L 16bit
11	BS2		
12	ODIR	I	Output data format setting terminal MSB first with "H", LSB first with "L".

Pin No.	Name	I／O	Description
13	V_{ss} 3	—	GND terminal
14	SCK	O	System clock output terminal. fsck = fxt = 512fs
15	XOUT	O	Quartz oscillation circuit output terminal
16	XIN	I	Quartz oscillation circuit input terminal
17	V_{DD} 1	—	+5V Power supply terminal
18	I/O4	I/O	Data input and output I/O4 for outside DRAM
19	I/O3	I/O	Data input and output I/O3 for outside DRAM
20	CAS	O	Outside DRAM column address strobe output terminal.
21	I/O2	I/O	Data input and output I/O2 for outside DRAM
22	I/O1	I/O	Data input and output I/O1 for outside DRAM
23	WE	O	Outside DRAM write enable output terminal. Valid with "L" level
24	A0	O	Outside DRAM address output A0
25	RAS	O	Outside DRAM row address strobe output terminal
26	A1	O	Outside DRAM address output A1
27	A2	O	Outside DRAM address output A2
28	Vss 2	—	GND terminal
29	A3	O	Outside DRAM address A3
30	A4	O	Outside DRAM address A4
31	A5	O	Outside DRAM address A5
32	A6	O	Outside DRAM address A6
33	A7	O	Outside DRAM address A7
34	A8	O	Outside DRAM address A8
35	TEST1	I	Test terminal. Normally fixed to GND.
36	TEST2	I	Test terminal. Normally fixed to GND.
37	TEST3	I	Test terminal. Normally fixed to GND.
38	TEST0	O	Tesr terminal
39	V_{DD} 2	—	+5V power supply terminal
40	PRGD	I	Serial data input terminal which receives the transmission of order, coefficient and control from the micro computer.
41	PRGCK	I	PRGD serial clock input terminal which receives data at positive edge.
42	PRGL	I	Latch input terminal to latch the serial data in IC from the microcomputer. Active "L".
43	INIT	I	Initialize terminal. Valid with "L". Re-synchronize at positive edge.
44	OVF	O	Output the over flow flag of DSP, L-ch MIX, R-ch MIX, L-ch EQ and R-ch EQ.

- IC109 Device Controller (M37450)
- The following items are conducted with the IC109 device controller.
- AU BUS is received and converted for transmission to feature controller (IC508).
- Devices such as DSP (IC111), DIO (IC123) and DPAC (IC112) are controlled in accordance with commands from feature controller (IC508).
- Tuner, deck and CD player are controlled by command transmissions to AU BUS.
- Power ON／OFF of CD players and cassette decks

Pin No.	Name	I／O	Description
1		—	Not used.
2	EV2	I	AU-BUS input
3	EV1	I	AU-BUS input
4	P57	O	AU-BUS output
5	P56	I	AU-BUS input
6	DBDATA	O	LC7822 (DBFB) control (serial data)
7	DBCE	O	LC7822 (DBFB) control (chip enable)
8	DBCLK	O	LC7822 (DBFB) control (clock)
9	DBRES	O	LC7822 (DBFB) control (reset)
10		—	Not used (OPEN).
11	MUTE	O	After VCA Mute. Low : Mute
12, 16	AMUTE	O	Analog Mute. Low : Mute
13	2DB	O	EQ Gain Switch + 2dB ＊1
14	4DB	O	EQ Gain Switch + 4dB ＊1
15	8DB	O	EQ Gain Switch + 8dB ＊1
17		—	Not used.
18	DINERR	I	CDX2905Q (DIO) status input. High : Unlock
19	INT1	I	Not used (GND).
20-24		—	Not used (OPEN).
25	CNV_{SS}	—	Power supply terminal (GND)
26	RESET	I	System reset input
27		—	Not used (OPEN).
28	XIN	I	Clock input (8MHz)
29	XOUT	O	Clock output
30, 31		—	Not used (OPEN).
32	V_{SS}	—	Power supply terminal (GND)
33		—	Not used (OPEN).
34	CDOFF	O	Power control for CDP-H6600, TC-H5600/H6600. Low : POWER ON
35		—	Not used (OPEN).
36	FRES	I	Function request from analog function controller in TC-H5600/H6600.
37	FS48	I	Receives the sampling frequency information from CXD2905Q (DIO). H : fs = 48KHz
38	2701LT	O	Latch to CXD2701Q (DPS + EQ).
39	DEVCLK	O	Data and shift clock to CXD2905Q, CXD1160AX, CXD2701Q.
40	DEVDATA	O	Data and shift clock to CXD2905Q, CXD1160AX, CXD2701Q.
41		—	Not used (OPEN).
42	FS32	I	Receives the sampling frequency information from CXD2905Q (DIO). H : FS = 32KHz
43	DIORDY	I	Handshake with CXD2905Q (DIO). Ready with High.
44		—	Not used (OPEN).
45	DIOIFST	O	CPU I/F for CXD2905Q
46	VCO／XTA	O	VCO/X'tal select. Low for Analog input.
47	AD／DIN	O	AD/DIN select. High for Analot input.
48	EMPH	I	Receives the emphasis information from CXD2905Q (DIO). H : Emphasis ON

Pin No.	Name	I／O	Description
49	CD／DAT	O	CD/DAT DIN select. L : CD, H : DAT
50	DIOIFINI	O	Initializes CPU I/F in CXD2905Q (DIO).
51	INITDA	—	Not used (OPEN).
52	INITDIO	O	CXD2905Q (DIO) reset
53	DOENA	O	Enable and Disable for digital Out
54	NENA	O	Enable output for noise generator of CXD8245M.
55	INIT EQ/D	O	Reset for CXD2701Q and CXD2560M
56	DPAC LT	O	Latch to CXD1160AQ (DPAC)
57	INIT AD	O	Initialization and calibration for CS5339 (A/D). Normal with Low.
58-62	P47-P43	—	Not used (OPEN).
63	NOSIGR	I	Low with no-digital signal
64	NOSIGL	I	Low with no-digital signal
65	AN	—	Not used (OPEN).
66	D-A2	O	D/A output to VCA
67	D-A1	O	D/A output to VCA
68	DAVref	—	Power supply terminal (+5V)
69	ADVref	—	Power supply terminal (+5V)
70	AV$_{ss}$	—	Power supply terminal (GND)
71	AS$_{cc}$	—	Power supply terminal (+5V)
72	V$_{cc}$	—	Power supply terminal (+5V)
73	V$_{ss}$	—	Power supply terminal (GND)
74, 75		—	Not used (OPEN).
76	TXD	O	Transmission output to MC68HC11 (feature controller). 4800 bps
77	RXD	I	Transmission input to MC68HC11 (feature controller). 4800 bps
78 – 80		—	Not used (OPEN).

※1 Equalizer gain switch

EQ gain [dB]		−12~0	2	4	6	8	10	12
⑬pin	+2dB	H	L	H	L	H	L	H
⑭pin	+4dB	H	H	L	L	H	H	L
⑮pin	+8dB	H	H	H	H	L	L	L

- IC506 Display Controller (TMP91C640F−2302)

The FL tube display is controlled with the display command from feature controller (IC506).

Pin No.	Pin Name	I／O	Description
1~11	———	I	Not used. (GND)
12	STB B	I	DATA send LATCH input from IC508
13,14	———	I	Not used. (GND)
15	$\overline{\text{NMI}}$	I	AC power supply interrupt detect input. (Normally set to "H".) Once "L" is received, the operation is terminated until the Pin No. 16 RESET is cancelled.
16	$\overline{\text{RESET}}$	I	Reset input. Resets when "L".
17	CLK		Not used. (GND)
18~25	PO0~PO7	I/O	Display command input from IC508
26	Vss	—	Power supply terminal (GND)
27	X1	I	Clock input (15 MHz)
28	X2	O	Clock output (15 MHz)
29,30	———	—	Not used. (Open)
31	STB A	O	DATA receive LATCH output to IC508
32	REQUEST	O	Normally set to "L". The Pin No. ⑱~㉕ ports are output when "H".
33~36	———	—	Not used. (Open)

Pin No.	Pin Name	I／O	Description
37~44	———	I	Not used. (GND)
45	———	—	Not used. (Open)
46	DCLR	O	Normally set to "H". Grid is not displayed when "L". DCLR is used for AC outlet ON/OFF only.
47	SCLR	O	Normally set to "L". Segment is not displayed when "H". SCLR is used for AC outlet ON/OFF only.
48	LATCH	O	Data LATCH output to IC501~IC505
49	$\overline{\text{EA}}$	I	Not used. (Pull-up)
50,51	———	I	Not used. (GND)
52	SCLK	O	Segment display clock output to IC502, IC503 and IC505 (segment drivers)
53	SDATA	O	Serial data output to IC502, IC503 and IC505 (segment drivers)
54	———	—	Not used. (GND)
55	DCLK	O	Grid display clock output to IC501 and IC504 (grid drivers)
56	DATA	O	Serial data output (approx. 10 msec sync pulse) to IC501 and IC504 (grid drivers)
57	———	—	Not used. (GND)
58	Vcc	—	Power supply terminal (+5 V)
59	Vref	—	Power supply terminal (+5 V)
60	A GND		Power supply terminal (GND)
61~64	———	—	Not used. (GND)

- IC508 Feature Controller (MC68H011E9-FU)

General controls such as FL display (IC506), IC109 control, spectrum analyzer input, and ON/OFF of mute, relay and LED, are conducted with the AU BUS data and key input from device controller (IC109).

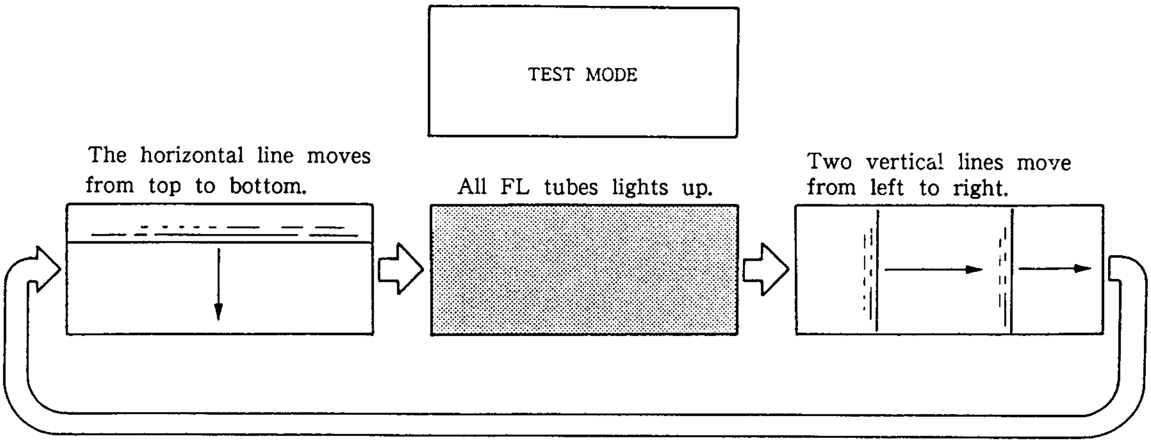
Pin No.	Pin Name	I／O	Description
1	PA0	I	Specification select input (H5600 : L) (H6600 : H)
2~4	NC	—	Not used. (GND)
5	———	O	Not used. (Open)
6~12	LED A~G	O	LED output. Lights up when "H". Conducts dynamic light up at Pin No. (59) (LED SW).
13~16	Spectrum analyzerA~D	I	Spectrum analyzer data input (Analog)
17	VOL DATA	I	Volume (RV601) position detect input (Analog)
18	PE 6	I	Specification select input
19	KEY A	I	Key input (Analog)
20	KEY B	I	
21	VRL	—	A/D converter (internal) power supply (GND)
22	VRH	—	A/D converter (internal) power supply (+5.6 V)
23, 24	Vss	—	Power supply terminal (GND)
25	MODE B	I	Mode select input (Pull-up fixed)
26	NC	—	Not used. (GND)
27	MODE A	I	Mode select input (GND fixed)
28	STR A	I	DATA receive LATCH input from IC506
29	E	O	Not used. (Open)
30	STR B	O	Data send LATCH input to IC506
31	EXTAL	I	Clock input (8 MHz)
32	NC	—	Not used. (Open)
33	XTAL	O	Clock output
34	PCO	I/O	Display command output to IC506
35	NC	—	Not used. (Open)
36~42	PC1~PC7	I/O	Display command output to IC506
43	$\overline{\text{RESET}}$	I	Reset input. Resets when "L".
44	NC	—	Not used. (GND)
45	$\overline{\text{IRQ}}$	I	Not used. (+5.6 V)

Pin No.	Pin Name	I／O	Description
46	$\overline{\text{XIRQ}}$	I	AC power supply interrupt detect input. (Normally set to "H".)
47	RX	I	Serial data input from IC109
48	NC	—	Not Used. (Open)
49	Vss	—	Power supply terminal (GND)
50	TX	O	Serial data output to IC109
51	POWER	O	Power relay (RY901) ON/OFF output. Active when "H".
52	SPEAKER	O	Speaker relay (RY801, 802) ON/OFF output. Active when "H".
53	MUTE	O	Muting output. Mutes when "L".
54	HP	I	Headphones switch input. "L" when headphones are connected.
55	V_{DD}	—	Power supply terminal (+5.6 V)
56	VOL UP	O	UP signal output to volume motor (RV601)
57	VOL DOWN	O	DOWN signal output to volume motor (RV601)
58	——	—	Not used (Open)
59	SPASW A	O	LED dynamic display/spectrum analyzer select output (3.5 msec square wave)
60, 61	NC	—	Not used. (GND)
62	SPASW B	O	Spectrum analyzer select output (2 msec square wave)
63	REQUEST	I	Normally set to "L". The Pin No. ㉞, and ㊱~㊷ ports are input when "H".
64	——	I	Not used. (GND)

- Test Mode

A test mode is provided to conduct FL tube (FL501) lighting test without disassembling the unit.

Press and release the POWER button while pressing the DISP button during the power ON condition. Release the DISP button to enter the Test Mode.
The following three types of patterns will be displayed each time the DISP button is pressed during this condition.


TEST MODE
The horizontal line moves from top to bottom.
All FL tubes lights up.
Two vertical lines move from left to right.

Other amplifier operations are identical to those during normal conditions (i.e. non-test mode condition). To exit the Test Mode, switch the power ON again.

- IC331 Pulse D/A Converter (CXD2561M)

The converter is a small, high-performance 1 bit pulse D/A converter that provides 4 asymmetrical PWM wave outputs in each ch of L/R.

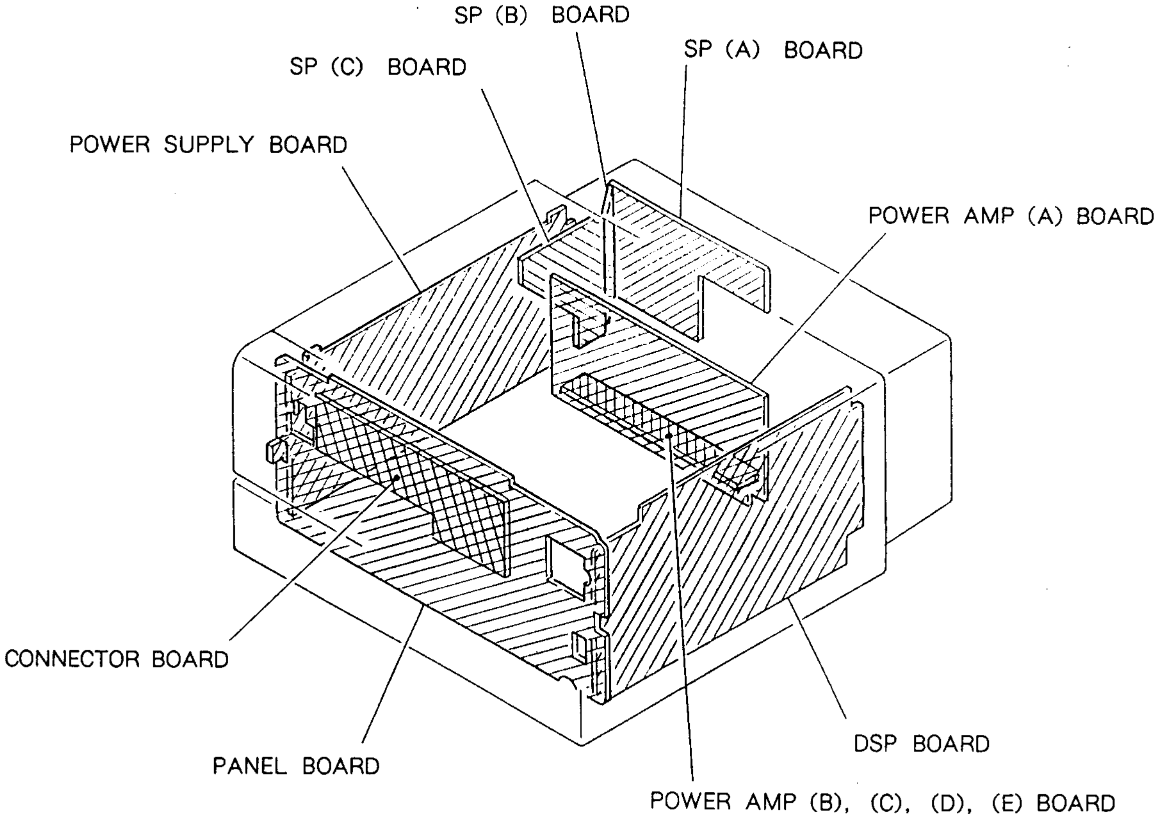
Pin No.	Pin Name	I／O	Description
1	DV$_{DD}$	—	Digital power supply
2	TEST	I	Test terminal. Normally fixed at "L".
3	INIT	I	Again synchronized at the buildup edge of the signal.
4	LRCKI	I	LRCK input
5	DRI	I	Rch data input
6	DLI	I	Lch data input
7	BCKI	I	BCK input
8	DVss	—	Digital GND
9	512Fs	O	512Fs output
10	XVss	—	Clock GND
11	XIN	I	X'tal oscillator input terminal (512Fs)
12	XOUT	O	X'tal oscillator output terminal
13	XV$_{DD}$	—	Clock power supply
14	VSUB	—	Substrate. Connected to GND.
15	AV$_{DD}$R	—	Analog power supply
16	R1 (+)	O	Rch PLM output 1 (normal phase)
17	AVssR	—	Analog GND
18	R1 (−)	O	Rch PLM output 1 (reverse phase)
19	R2 (+)	O	Rch PLM output 2 (normal phase)
20	R2 (−)	O	Rch PLM output 2 (reverse phase)
21	AV$_{DD}$	—	Analog power supply
22	AVss	—	Analog GND
23	L2 (−)	O	Lch PLM output 2 (reverse phase)
24	L2 (+)	O	Lch PLM output 2 (normal phase)
25	L1 (−)	O	Lch PLM output 1 (reverse phase)
26	AVssL	—	Analog GND
27	L1 (+)	O	Lch PLM output 1 (normal phase)
28	AV$_{DD}$L	—	Analog power supply

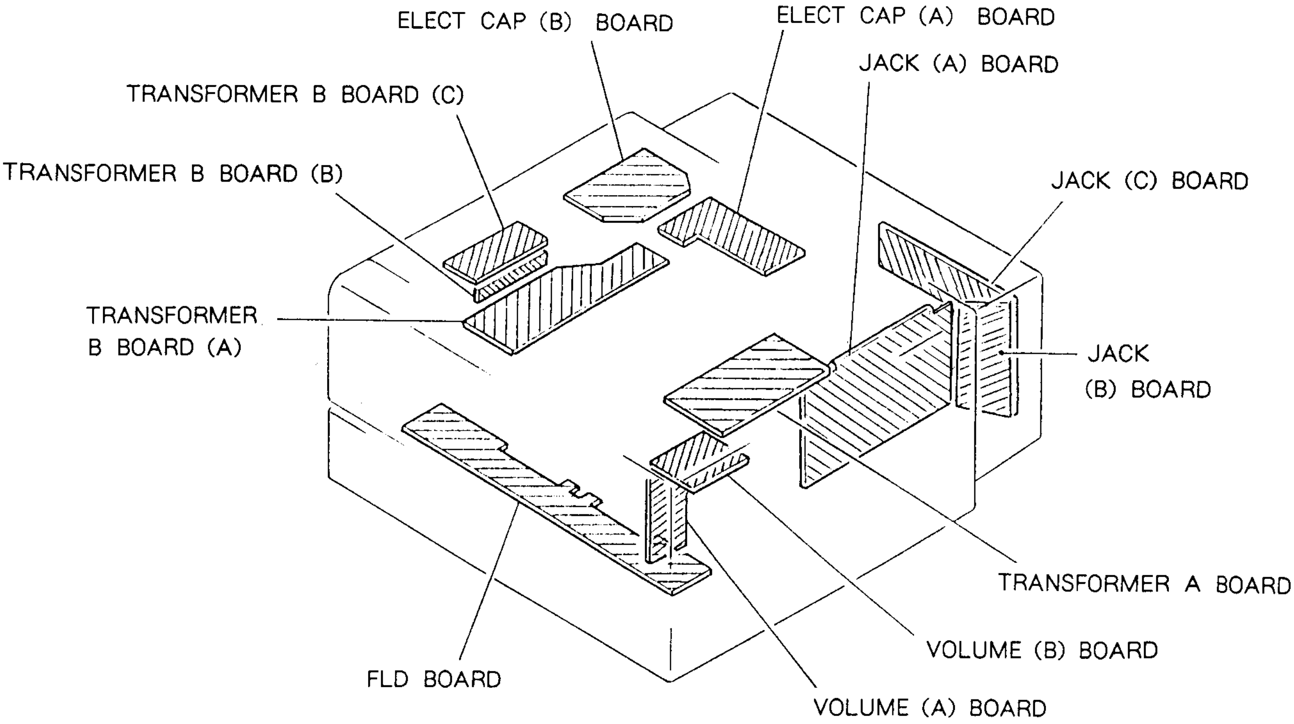
- IC332 Digital Filter (CXD2560M)

The filter is a digital audio 8x oversampling digital filter with built-in L/R 2ch filter, noise shaping attenuator, softmuting deemphasis, etc.

Pin No.	Pin Name	I／O	Description
1	Vss	—	Power terminal (GND)
2	SYSM	I	System mute input. Effective upon "H"
3	ATT	I	ATT data input in CTL "L." EMP input upon CTL "H."
4	SHIFT	I	Shift clock input upon CTL "L." FS32 input upon CTL "H."
5	LATCH	I	Latch clock input upon CTL "L." FS48 input upon CTL "H."
6	CTL	I	Pull-down in the IC. Direct input mode upon "H." Serial transfer mode upon "L."
7	INIT	I	Synchronized again at the buildup edge of the signal.
8	BCKI	I	BCK input
9	DATAI	I	Data input
10	LACKI	I	LRCK input
11	TEST	I	Test terminal. Fixed at "L" during normal use.
12	Vss	—	Power terminal (GND)
13	128Fs	O	128Fs clock output
14	INVI	I	Inverter input
15	INVO	O	Inverter output
16	INVO2	O	Inverter output
17	MCLK	I	Master clock input (f=512Fs)
18	V$_{DD}$	—	Power terminal (+5 V)
19	BCKO	O	BCK output
20	DL	O	Lch data output
21	DR	O	Rch data output
22	LRCKO	O	LRCK output
23	FLGL	O	Lch ϕ mute flag output
24	FLGR	O	Rch ϕ mute flag output

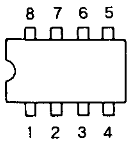
2-2. CIRCUIT BOARDS LOCATION


SP (B) BOARD
SP (C) BOARD
SP (A) BOARD
POWER SUPPLY BOARD
POWER AMP (A) BOARD
CONNECTOR BOARD
PANEL BOARD
DSP BOARD
POWER AMP (B), (C), (D), (E) BOARD


ELECT CAP (B) BOARD
ELECT CAP (A) BOARD
JACK (A) BOARD
TRANSFORMER B BOARD (C)
TRANSFORMER B BOARD (B)
JACK (C) BOARD
TRANSFORMER B BOARD (A)
JACK (B) BOARD
TRANSFORMER A BOARD
VOLUME (B) BOARD
FLD BOARD
VOLUME (A) BOARD

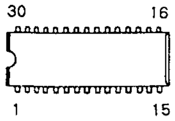
2-3. SEMICONDUCTOR LEAD LAYOUTS

LM393P



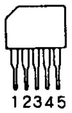
(TOP VIEW)

LC7822



(TOP VIEW)

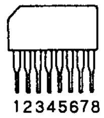
M51953BL



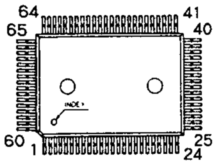
μPC1237HA

M5218AL

M5230L-A



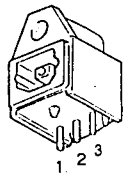
CXD1160AQ


64
41
65
40
INDEX
60
1
25
24

MARKING SIDE VIEW

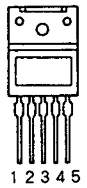
GP1F34R

GP1F34T



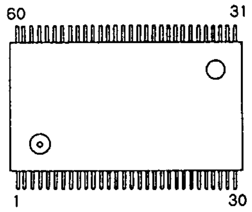
	34R	34T
1	VCC	IN
2	GND	VCC
3	OUT	GND

LM3875-2



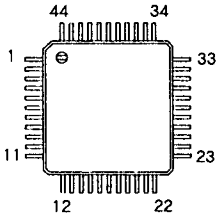
1 + IN
2 − IN
3 − VEE
4 OUT
5 VCC

MSC7162

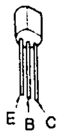


SN75521

SN75531


44
34
1
33
11
23
12
22

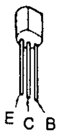
2SC1841-PAFAEA



2SB1013-4

2SD1387-3

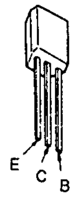
2SD1616A-K



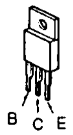
DTC114ES

2SA1134

2SC2603-EF

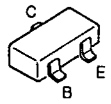


2SB1094-L

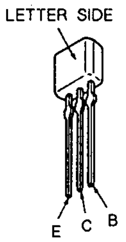


2SC3398

2SC3624A-15



2SA1175-HFE


LETTER SIDE
E
C
B

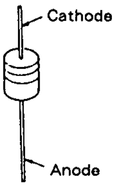
HZS6B1L

HZS7B2L

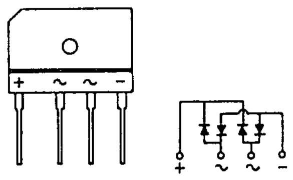
HZS11B3L

1SS120

11ES2


Cathode
Anode

RBV-602-01

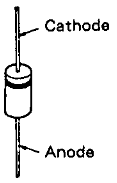


HZS30-2L

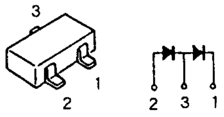
HZ12B2L

1SS120

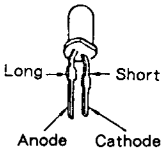
1S1585


Cathode
Anode

1SS226

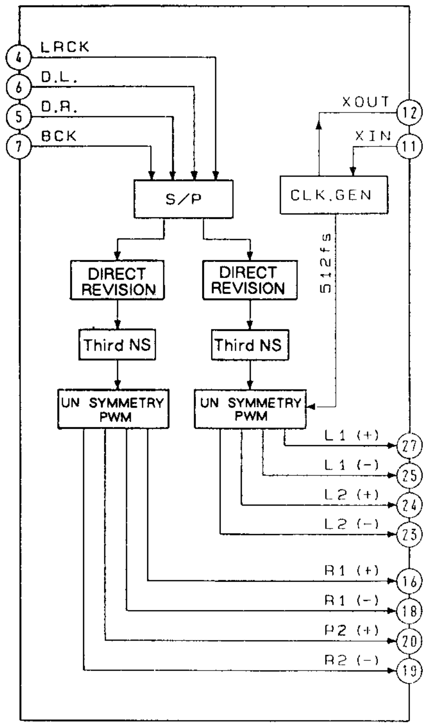


SEL2410E-D


Long
Short
Anode
Cathode

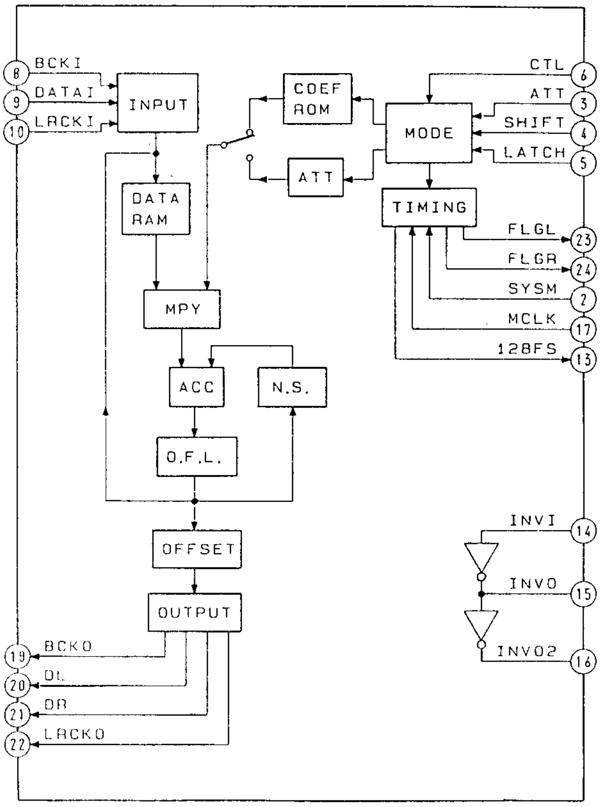
2-4. IC BLOCK DIAGRAMS

IC331 CXD2561



4 LRCK
6 D.L.
5 D.R.
7 BCK
XOUT 12
XIN 11
S/P
CLK.GEN
512fs
DIRECT REVISION
DIRECT REVISION
Third NS
Third NS
UN SYMMETRY PWM
UN SYMMETRY PWM
L1 (+) 27
L1 (-) 25
L2 (+) 24
L2 (-) 23
R1 (+) 16
R1 (-) 18
R2 (+) 20
R2 (-) 19

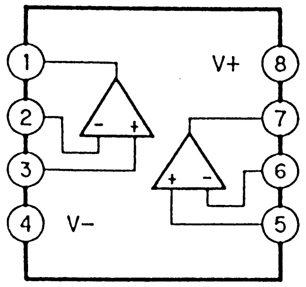
IC332 CXD2560M



8 BCKI
9 DATAI
10 LRCKI
INPUT
COEF ROM
ATT
MODE
CTL 6
ATT 3
SHIFT 4
LATCH 5
TIMING
FLGL 23
FLGR 24
SYSM 2
MCLK 17
128FS 13
DATA RAM
MPY
ACC
N.S.
O.F.L.
OFFSET
OUTPUT
19 BCKO
20 DL
21 DR
22 LRCKO
INVI 14
INVO 15
INVO2 16

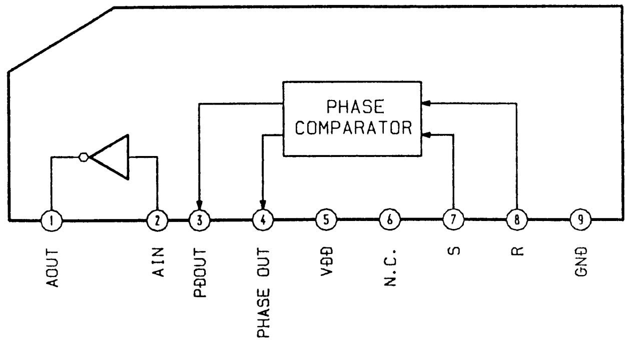
2-5. BLOC

IC3, IC121 TL082M
IC113-120 M5218AFP



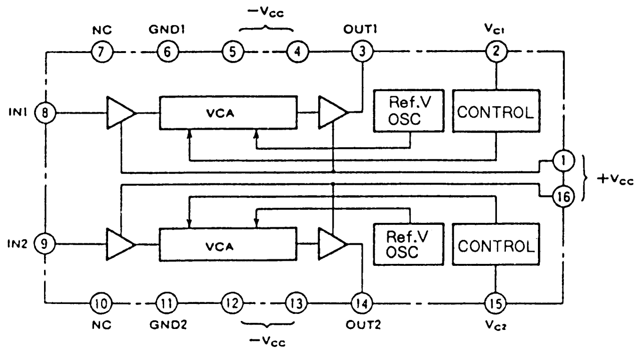
V+
V-
1
2
3
4
5
6
7
8

IC392 TC5081AP



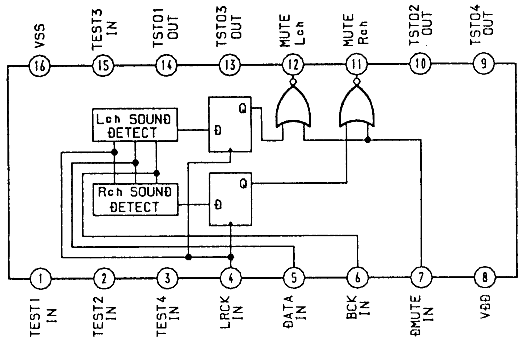
PHASE COMPARATOR
AOUT
AIN
PDOUT
PHASE OUT
VDD
N.C.
S
R
GND

IC101 M5283P



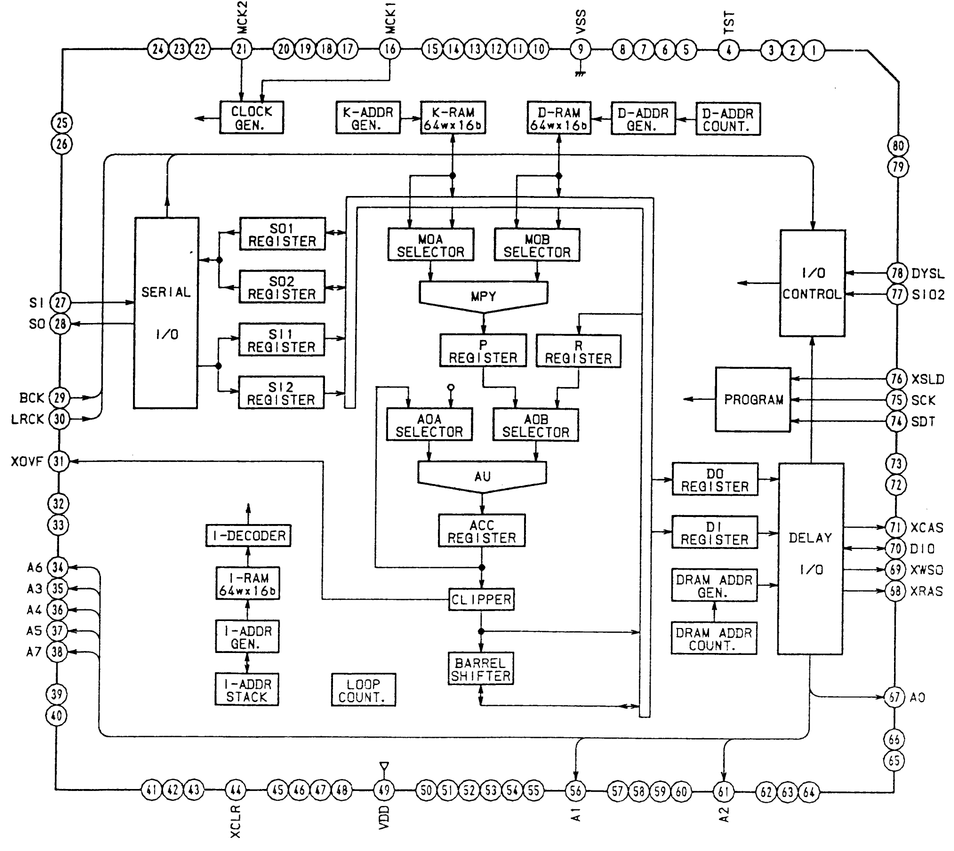
NC
GND1
-Vcc
OUT1
Vc1
IN1
VCA
Ref.V OSC
CONTROL
+Vcc
IN2
NC
GND2
-Vcc
OUT2
Vc2

IC108 CXD2557M



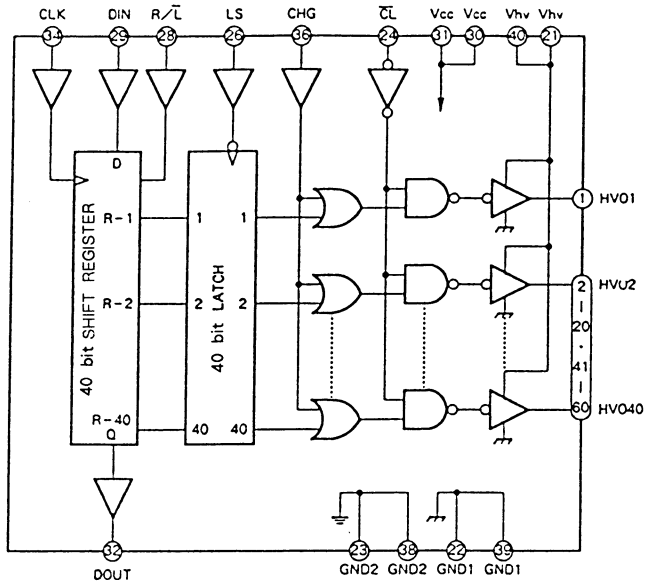
VSS
TEST3 IN
TSTO1 OUT
TSTO3 OUT
MUTE Lch
MUTE Rch
TSTO2 OUT
TSTO4 OUT
Lch SOUND DETECT
Rch SOUND DETECT
Q
D
TEST1 IN
TEST2 IN
TEST4 IN
LRCK IN
DATA IN
BCK IN
ØMUTE IN
VDD

IC112 CXD1160AQ



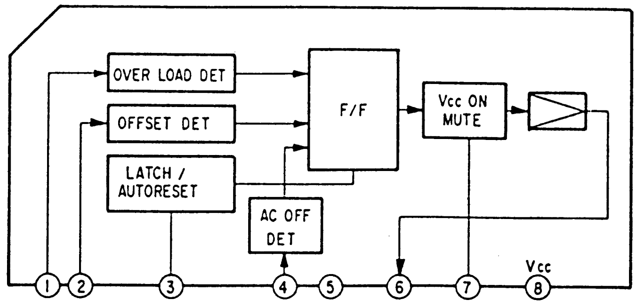
MCK2
MCK1
VSS
TST
CLOCK GEN.
K-ADDR GEN.
K-RAM 64w×16b
D-RAM 64w×16b
D-ADDR GEN.
D-ADDR COUNT.
SERIAL I/O
SO1 REGISTER
SO2 REGISTER
SI1 REGISTER
SI2 REGISTER
MOA SELECTOR
MOB SELECTOR
MPY
P REGISTER
R REGISTER
AOA SELECTOR
AOB SELECTOR
AU
ACC REGISTER
CLIPPER
BARREL SHIFTER
I-DECODER
I-RAM 64w×16b
I-ADDR GEN.
I-ADDR STACK
LOOP COUNT.
I/O CONTROL
PROGRAM
DO REGISTER
DI REGISTER
DRAM ADDR GEN.
DRAM ADDR COUNT.
DELAY I/O
SI
SO
BCK
LRCK
XOVF
A6
A3
A4
A5
A7
DYSL
SIO2
XSLD
SCK
SDT
XCAS
DIO
XWSO
XRAS
A0
XCLR
VDD
A1
A2

IC501, 504 MSC7162



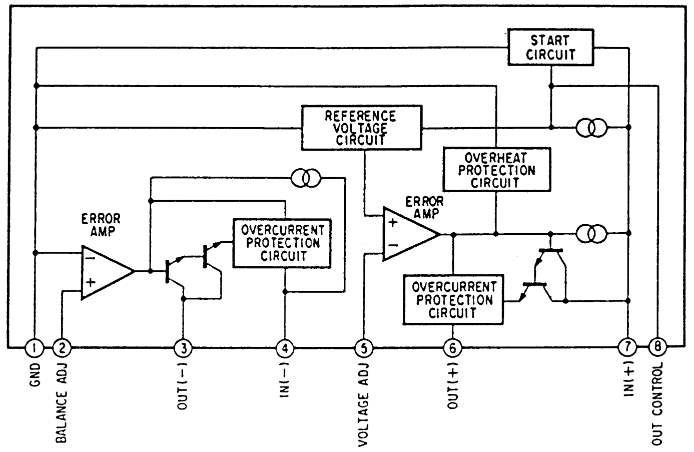
CLK
DIN
R/L̄
LS
CHG
C̄L̄
Vcc
Vcc
Vhv
Vhv
40 bit SHIFT REGISTER
40 bit LATCH
D
R-1
R-2
R-40
Q
HVO1
HVO2
HVO40
DOUT
GND2
GND2
GND1
GND1

IC701 μ PC1237HA



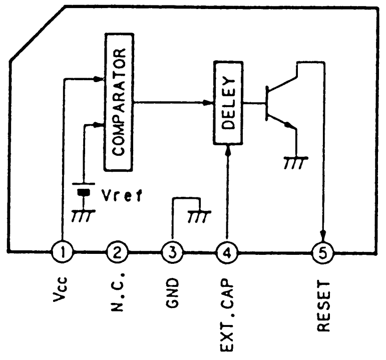
OVER LOAD DET
OFFSET DET
LATCH / AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc

IC901 M5230L



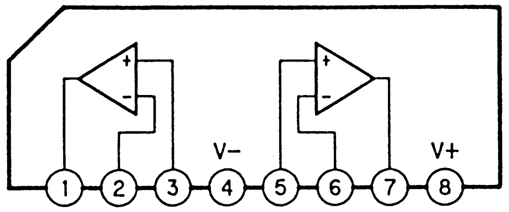
START CIRCUIT
REFERENCE VOLTAGE CIRCUIT
OVERHEAT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
GND
BALANCE ADJ
OUT(-)
IN(-)
VOLTAGE ADJ
OUT(+)
IN(+)
OUT CONTROL

IC507 M51953BL

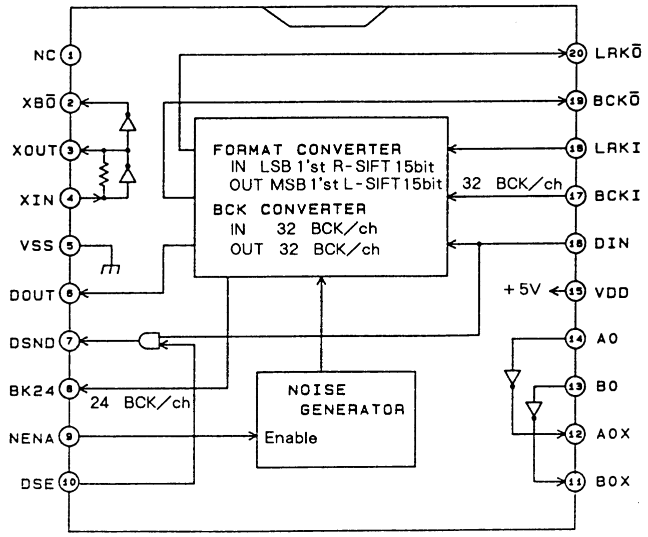


COMPARATOR
DELEY
Vref
Vcc
N.C.
GND
EXT.CAP
RESET

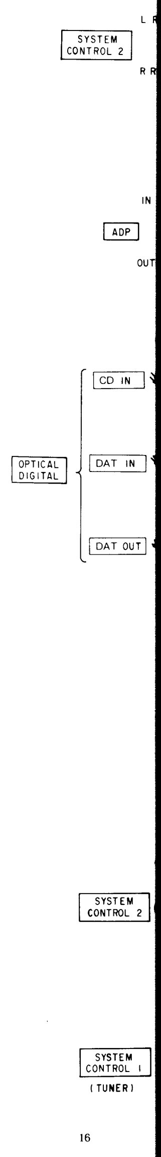
IC651 M5218AL



IC106 CXD8245M

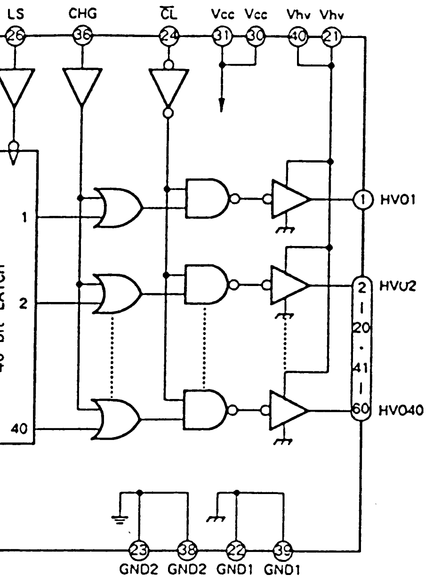


NC
XBŌ
XOUT
XIN
VSS
DOUT
DSND
BK24
NENA
DSE
LRKŌ
BCKŌ
LRKI
BCKI
DIN
VDD
AO
BO
AOX
BOX
+5V
FORMAT CONVERTER
IN LSB 1'st R-SIFT 15bit
OUT MSB 1'st L-SIFT 15bit
32 BCK/ch
BCK CONVERTER
IN 32 BCK/ch
OUT 32 BCK/ch
24 BCK/ch
NOISE GENERATOR
Enable

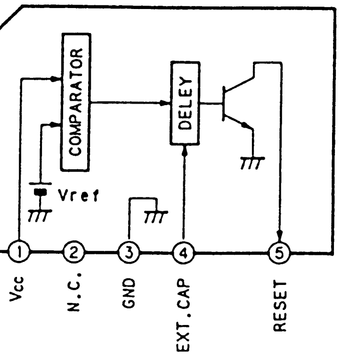


SYSTEM CONTROL 2
ADP
CD IN
OPTICAL DIGITAL
DAT IN
DAT OUT
SYSTEM CONTROL 2
SYSTEM CONTROL 1
(TUNER)

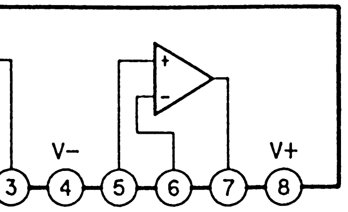
62


LS
CHG
CL
Vcc Vcc
Vhv Vhv
HVO1
HVU2
HVO40
GND2 GND2 GND1 GND1

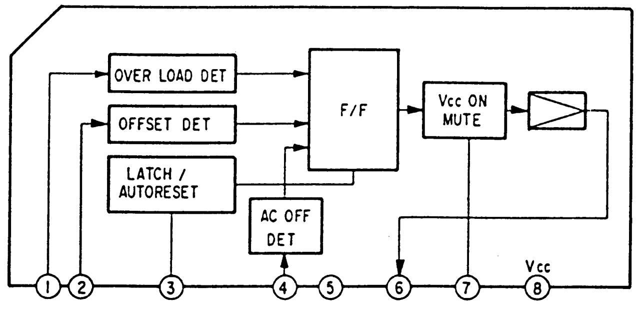
3BL


COMPARATOR
DELEY
Vref
Vcc
N.C.
GND
EXT.CAP
RESET

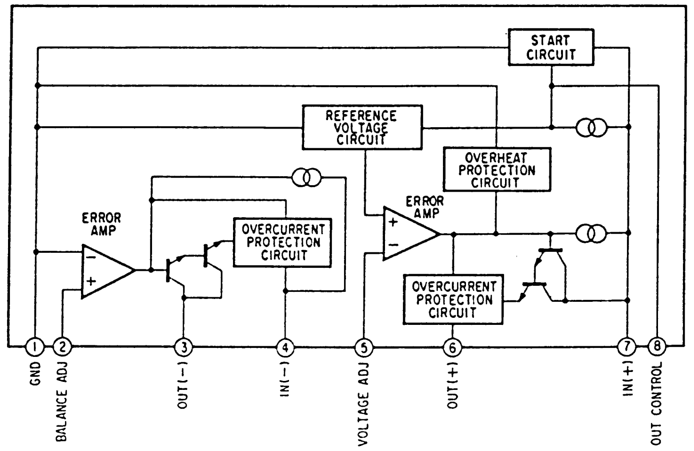
AL



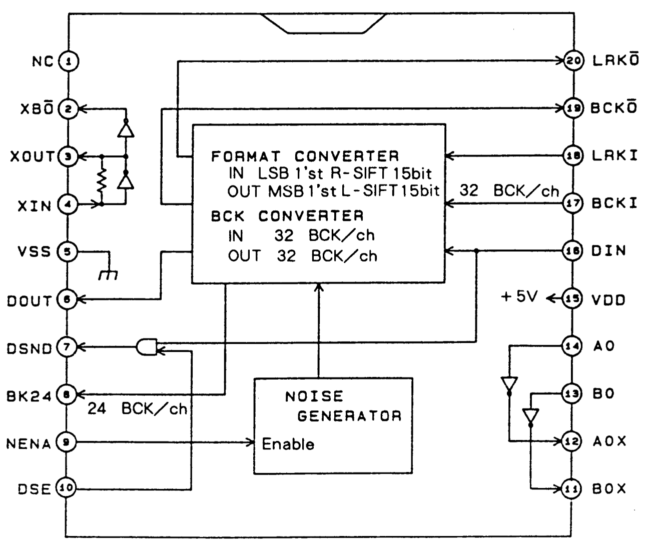
IC701 μ PC1237HA


OVER LOAD DET
OFFSET DET
LATCH / AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc

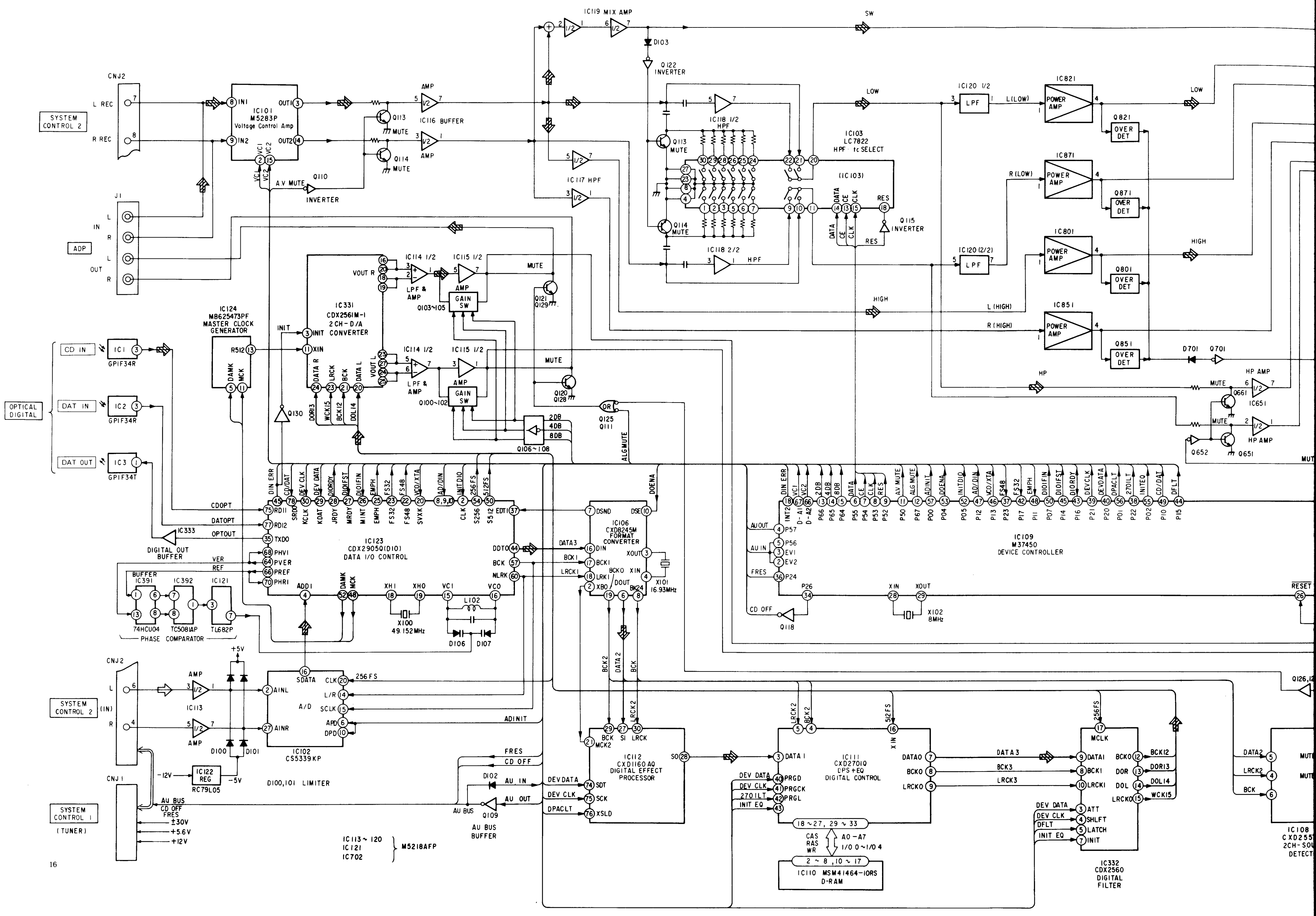
IC901 M5230L

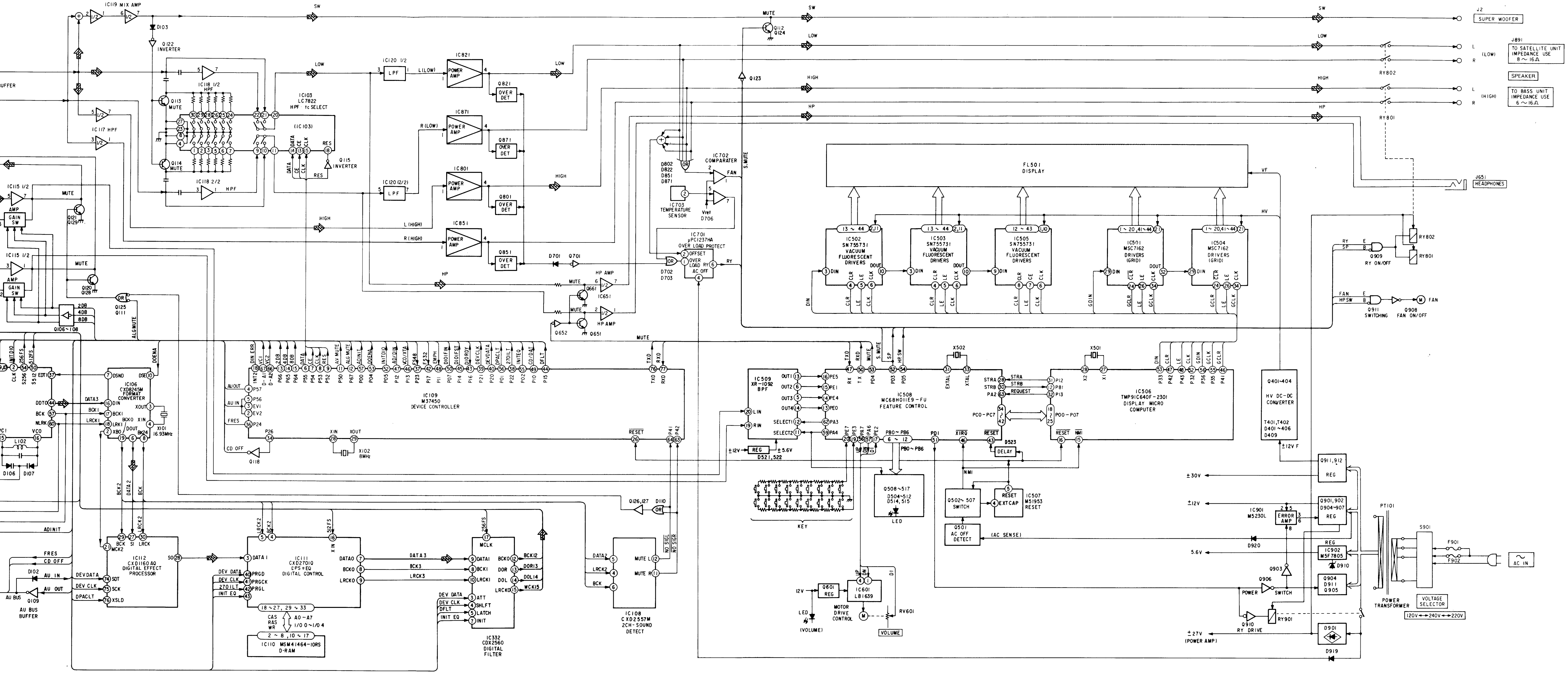

START CIRCUIT
REFERENCE VOLTAGE CIRCUIT
OVERHEAT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
GND
BALANCE ADJ
OUT(−)
IN(−)
VOLTAGE ADJ
OUT(+)
IN(+)
OUT CONTROL

IC106 CXD8245M


NC
XBŌ
XOUT
XIN
VSS
DOUT
DSND
BK24
NENA
DSE
LRKŌ
BCKŌ
LRKI
BCKI
DIN
VDD
AO
BO
AOX
BOX
FORMAT CONVERTER
IN LSB 1'st R-SIFT 15bit
OUT MSB 1'st L-SIFT 15bit
BCK CONVERTER
IN 32 BCK/ch
OUT 32 BCK/ch
32 BCK/ch
24 BCK/ch
+5V
NOISE GENERATOR
Enable

2-5. BLOCK DIAGRAM


SYSTEM CONTROL 2
CNJ2
L REC
R REC
IC101 M5283P Voltage Control Amp
IC116 BUFFER
Q113 MUTE
Q114 MUTE
Q110 A.V MUTE INVERTER
ADP
J1
IN
OUT
IC119 MIX AMP
D103
Q122 INVERTER
IC117 HPF
IC118 1/2 HPF
IC118 2/2 HPF
IC103 LC7822 HPF fc SELECT
Q115 INVERTER
IC120 1/2 LPF
IC120 (2/2) LPF
IC821 POWER AMP
IC871 POWER AMP
IC801 POWER AMP
IC851 POWER AMP
Q821 OVER DET
Q871 OVER DET
Q801 OVER DET
Q851 OVER DET
SW
LOW
HIGH
L (LOW)
R (LOW)
L (HIGH)
R (HIGH)
HP
D701 Q701
HP AMP
IC651
Q661
Q652
Q651
OPTICAL DIGITAL
CD IN IC1 GP1F34R
DAT IN IC2 GP1F34R
DAT OUT IC3 GP1F34T
IC124 M8625473PF MASTER CLOCK GENERATOR
IC331 CDX2561M-1 2CH-D/A CONVERTER
IC114 1/2 LPF & AMP
IC115 1/2 AMP GAIN SW
Q103~105
Q100~102
Q121 Q129
Q120 Q128
Q125 Q111
Q106~108
Q130
IC333 DIGITAL OUT BUFFER
IC123 CDX2905Q(D101) DATA I/O CONTROL
BUFFER IC391 74HCU04
IC392 TC5081AP
IC121 TL682P
PHASE COMPARATOR
X100 49.152MHz
L102
D106 D107
IC106 CXD8245M FORMAT CONVERTER
X101 16.93MHz
IC109 M37450 DEVICE CONTROLLER
X102 8MHz
Q118
CD OFF
AU OUT
AU IN
FRES
RESET
IC113 AMP
D100 D101
IC102 CS5339KP
A/D
D100,101 LIMITER
IC122 REG RC79L05
CNJ1
SYSTEM CONTROL 1 (TUNER)
AU BUS
CD OFF
FRES
±30V
+5.6V
+12V
−12V
−5V
+5V
IC113~120 IC121 IC702 M5218AFP
Q109 AU BUS BUFFER
D102
IC112 CXD1160AQ DIGITAL EFFECT PROCESSOR
IC111 CXD2701Q LPS+EQ DIGITAL CONTROL
IC110 MSM41464-10RS D-RAM
IC332 CDX2560 DIGITAL FILTER
IC108 CXD255 2CH-SOU DETECT
Q126,12
16


IC119 MIX AMP
D103
Q122 INVERTER
IC118 1/2 HPF
Q113 MUTE
Q114 MUTE
IC118 2/2 HPF
IC117 HPF
IC103 LC7822 HPF fc SELECT
Q115 INVERTER
IC115 1/2 AMP
GAIN SW
IC115 1/2 AMP
Q121 Q129
Q120 Q128
Q125 Q111
Q106~108
ALGMUTE
DOENA
IC106 CXD8245M FORMAT CONVERTER
X101 16.93MHz
D106
D107
L102
IC120 1/2 LPF
IC120 (2/2) LPF
IC821 POWER AMP
IC871 POWER AMP
IC801 POWER AMP
IC851 POWER AMP
Q821 OVER DET
Q871 OVER DET
Q801 OVER DET
Q851 OVER DET
L(LOW)
R(LOW)
L(HIGH)
R(HIGH)
SW
LOW
HIGH
HP
MUTE
D701
Q701
HP AMP
IC651
Q661
Q652
Q651
IC109 M37450 DEVICE CONTROLLER
X102 8MHz
Q118
CD OFF
AU OUT
AU IN
FRES
IC112 CXD1160AQ DIGITAL EFFECT PROCESSOR
D102
Q109
AU BUS BUFFER
ADINIT
DEV DATA
DEV CLK
DPACLT
IC111 CXD2701Q EPS+EQ DIGITAL CONTROL
IC110 MSM41464-10RS D-RAM
IC332 CDX2560 DIGITAL FILTER
Q126,127
D110
IC108 CXD2557M 2CH-SOUND DETECT
Q112 Q124
Q123
S.MUTE
D802 D822 D851 D871
IC702 COMPARATER
FAN
IC703 TEMPERATURE SENSOR
Vref D706
IC701 μPC1237HA OVER LOAD PROTECT
D702 D703
FL501 DISPLAY
IC502 SN75731 VACUUM FLUORESCENT DRIVERS
IC503 SN75731 VACUUM FLUORESCENT DRIVERS
IC505 SN75731 VACUUM FLUORESCENT DRIVERS
IC501 MSC7162 DRIVERS (GRID)
IC504 MSC7162 DRIVERS (GRID)
VF
HV
IC509 XR-1092 BPF
IC508 MC68HC11E9-FU FEATURE CONTROL
X502
X501
IC506 TMP91C640F-2301 DISPLAY MICRO COMPUTER
D521,522
REG
D523 DELAY
KEY
Q508~517 D504~512 D514,515 LED
Q502~507 SWITCH
IC507 M51953 RESET
Q501 AC OFF DETECT
(AC SENSE)
Q601 REG
IC601 LB1639
MOTOR DRIVE CONTROL
LED (VOLUME)
RV601
VOLUME
Q401~404 HV DC-DC CONVERTER T401,T402 D401~406 D409
J2 SUPER WOOFER
J891 TO SATELLITE UNIT IMPEDANCE USE 8～16Ω
SPEAKER
TO BASS UNIT IMPEDANCE USE 6～16Ω
RY802
RY801
J651 HEADPHONES
Q909 RY ON/OFF
Q911 SWITCHING
Q908 FAN ON/OFF
Q911,912 REG
Q901,902 Q904~907 REG
IC901 M5230L
ERROR AMP
D920
IC902 M5F7805
D910
Q903
Q906 SWITCH
Q904 D911 Q905
Q910 RY DRIVE
RY901
D901
D919
±30V
±12V
5.6V
±27V (POWER AMP)
±12V F
POWER
PT101 POWER TRANSFORMER
S901 VOLTAGE SELECTOR
120V↔240V↔220V
F901
F902
AC IN

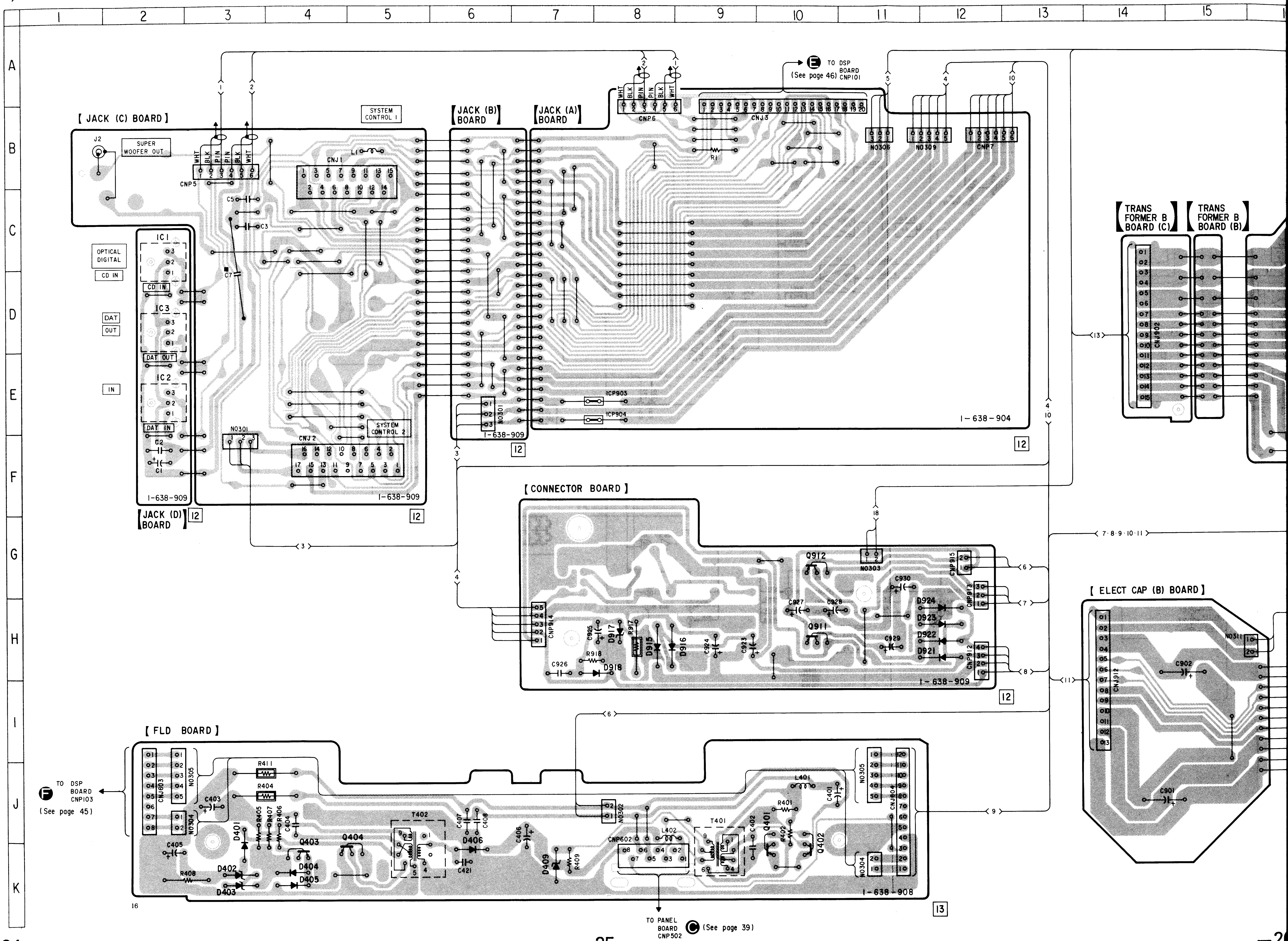
2-6. PRINTED WIRING BOARDS — JACK, POWER SUPPLY SECTION — • See page 16 to 17 for Circuit Boards Location and Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D401	J-3	Q403	J-4
D402	J-3	Q404	J-4
D403	J-3	Q651	D-31
D404	J-4	Q652	D-31
D405	J-4	Q661	D-31
D406	J-6	Q701	H-22
D409	J-7	Q801	I-20
D701	H-22	Q821	J-19
D702	H-22	Q851	I-23
D703	H-23	Q871	J-24
D704	I-21	Q901	E-30
D705	I-22	Q902	E-29
D706	I-22	Q903	D-30
D801	J-21	Q904	B-30
D802	I-21	Q905	B-31
D821	J-20	Q906	C-31
D822	I-20	Q907	G-7
D851	J-22	Q908	B-27
D852	I-21	Q909	C-25
D871	J-23	Q910	C-28
D872	I-20	Q911	H-20
D891	D-24	Q911	B-26
D892	C-24	Q912	G-10
D901	C-26		
D902	C-28		
D903			
D904	B-29		
D905			
D906	C-28		
D907	C-28		
D908	B-29		
D909	B-29		
D910	B-31		
D911	B-31		
D912	G-8		
D913	G-8		
D914	G-8		
D915	H-8		
D916	H-8		
D917	H-7		
D918	H-7		
D919	B-25		
D920	B-31		
D921	H-11		
D922	H-11		
D923	G-11		
D924	G-11		
IC1	C-2		
IC2	E-2		
IC3	D-2		
IC651	C-31		
IC701	H-22		
IC702	J-22		
IC703	I-22		
IC801	K-21		
IC821	K-19		
IC851	K-22		
IC871	K-24		
IC901	D-29		
IC902	B-31		
Q401	J-9		
Q402	J-10		

Note on Mounting Diagram :

- ○—— : Parts extracted from the component side.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12
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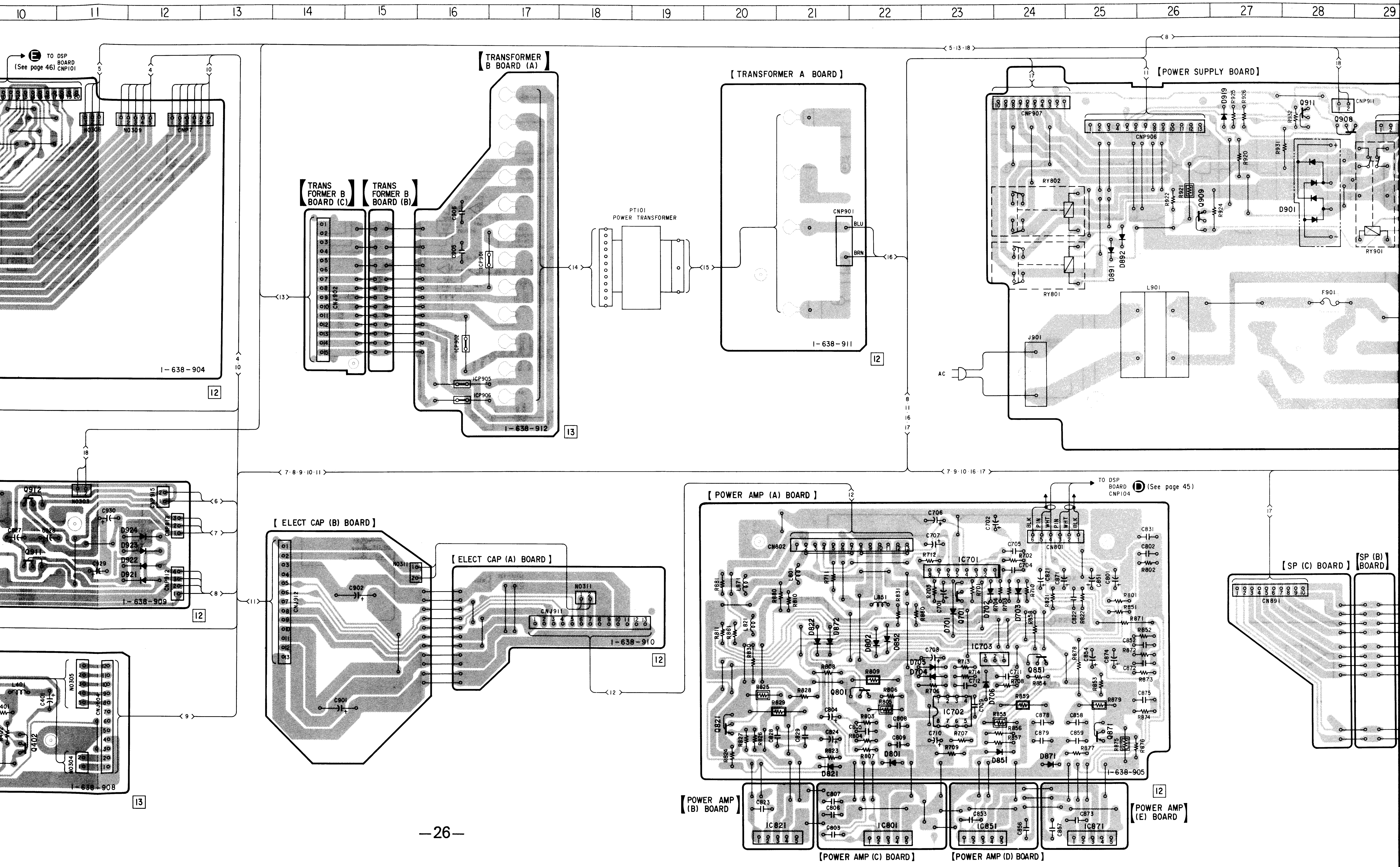
15
A
B
C
D
E
F
G
H
I
J
K
【JACK (C) BOARD】
J2
SUPER WOOFER OUT
CNP5
WHT
BLK
PIN
SYSTEM CONTROL 1
CNJ1
L1
C5
C3
C7
OPTICAL DIGITAL
CD IN
DAT OUT
IN
IC1
IC3
IC2
DAT IN
C2
C1
N0301
CNJ2
SYSTEM CONTROL 2
1-638-909
【JACK (D) BOARD】
12
【JACK (B) BOARD】
【JACK (A) BOARD】
CNP6
CNJ3
R1
E TO DSP BOARD CNP101 (See page 46)
N0306
N0309
CNP7
ICP903
ICP904
1-638-904
【TRANS FORMER B BOARD (C)】
【TRANS FORMER B BOARD (B)】
CNJ902
【CONNECTOR BOARD】
N0303
Q912
CNP915
CNP913
CNP912
CNP914
C930
C927
C928
D924
D923
D922
D921
Q911
C929
C925
D917
R917
D915
D916
C924
C923
C926
R918
D918
1-638-909
【ELECT CAP (B) BOARD】
N0311
CNJ912
C902
C901
【FLD BOARD】
CNJ603
N0305
N0304
R411
R404
C403
R405
R407
R406
C404
C405
D401
R408
D402
D403
Q403
D404
D405
Q404
T402
C407
C408
D406
C421
C406
D409
R409
N0302
CNP602
L402
T401
C402
Q401
R402
Q402
L401
C401
R401
CNJ604
1-638-908
F TO DSP BOARD CNP103 (See page 45)
TO PANEL BOARD CNP502 C (See page 39)
16


10
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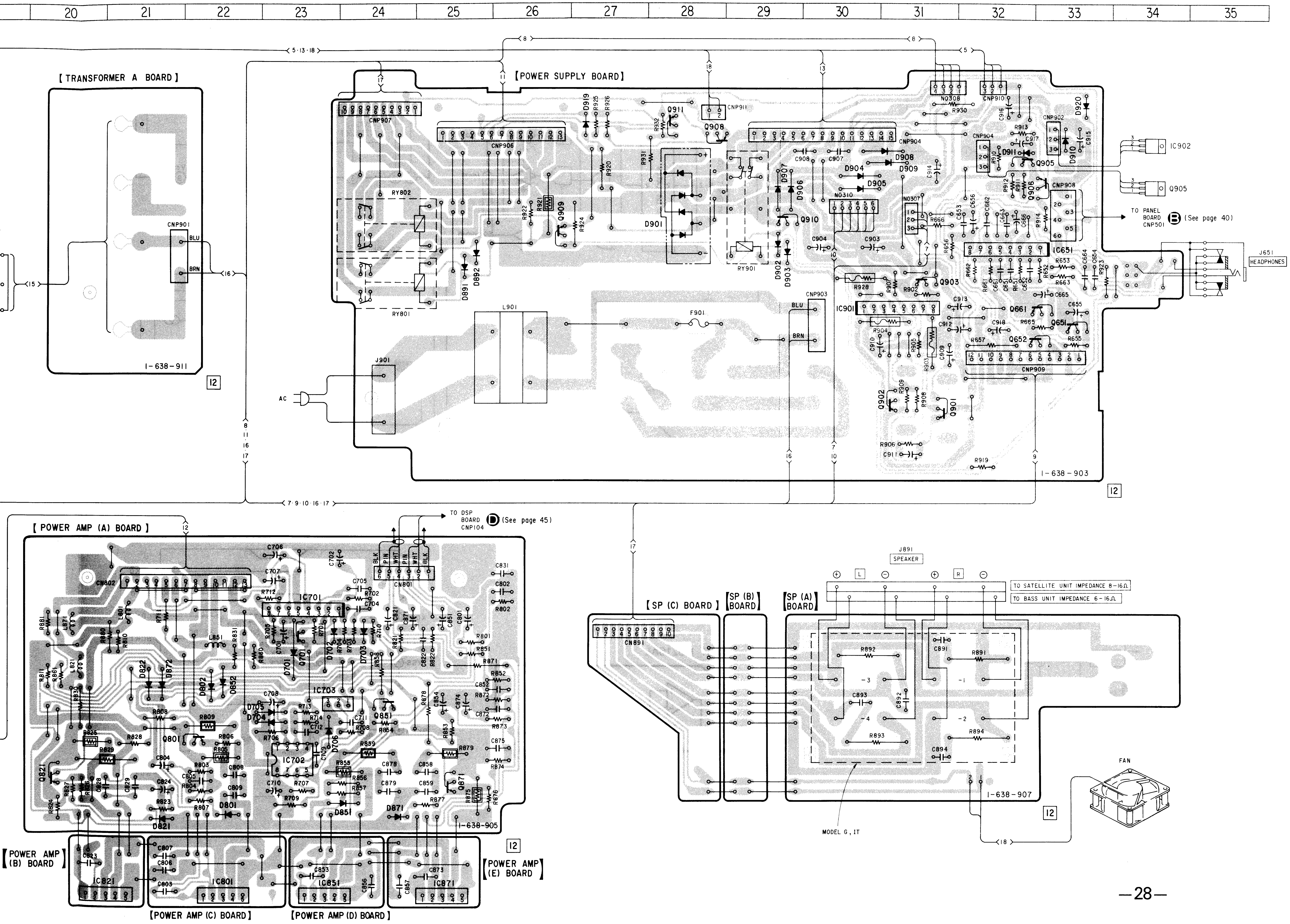
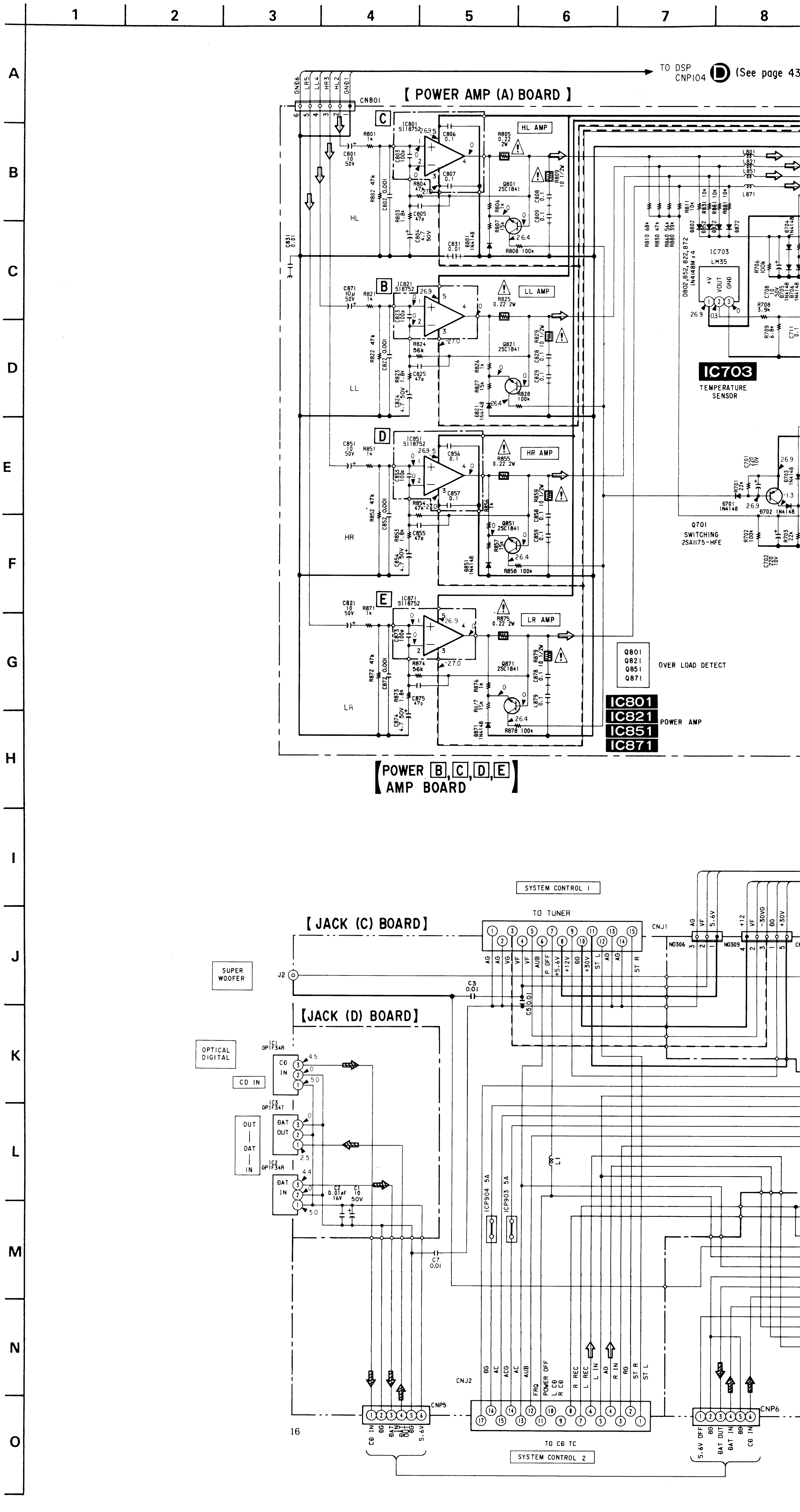
26
27
28
29
TO DSP BOARD CNP101
(See page 46)
N0306
N0309
CNP7
1-638-904
12
【TRANSFORMER B BOARD (A)】
【TRANS FORMER B BOARD (C)】
【TRANS FORMER B BOARD (B)】
CNJ902
C906
C905
ICP901
ICP902
ICP905
ICP906
1-638-912
13
PT101
POWER TRANSFORMER
【TRANSFORMER A BOARD】
CNP901
BLU
BRN
1-638-911
12
【POWER SUPPLY BOARD】
CNP907
CNP906
D919
R925
R926
Q911
R932
CNP911
Q908
R931
R920
RY802
R922
R921
Q909
R924
D901
D892
D891
RY801
RY901
L901
F901
J901
AC
Q912
N0303
CNP915
C930
C927
C928
CNP912
D924
D923
D922
D921
Q911
C929
CNP912
1-638-909
12
【ELECT CAP (B) BOARD】
CNJ912
N0311
C902
C901
【ELECT CAP (A) BOARD】
N0311
CNJ911
1-638-910
12
L401
C401
N0305
CNJ304
Q402
N0304
1-638-908
13
【POWER AMP (A) BOARD】
TO DSP BOARD CNP104
(See page 45)
CN802
CN801
BLK
PIN
WHT
IC701
IC703
IC702
Q801
Q851
Q871
Q821
D821
D801
D851
D871
1-638-905
12
【POWER AMP (B) BOARD】
IC821
IC801
【POWER AMP (C) BOARD】
IC851
【POWER AMP (D) BOARD】
IC871
【POWER AMP (E) BOARD】
【SP (C) BOARD】
【SP (B) BOARD】
CN891


20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
【TRANSFORMER A BOARD】
CNP901
BLU
BRN
1-638-911
12
【POWER SUPPLY BOARD】
CNP907
CNP906
RY802
RY801
D919 R925 R926
Q911
R932
CNP911
Q908
R931
R920
R922 R921 Q909 R924
D891 D892
D901
D907 D906
Q910
D902 D903
RY901
L901
F901
J901
AC
CNP903
BLU
BRN
CNP904
C908 C907
D908 D909
D904 D905
C914
N0310
C904 C903
N0308
R930
CNP910
C916
R913
C917
CNP904
R910 D911
Q905
D910
C915
CNP902
D920
IC902
Q905
R912 R911 Q906
CNP908
TO PANEL BOARD Ⓑ (See page 40) CNP501
N0307
R666
C653 C656 C662 C663 C666 R914
IC651
R656
R928
R907 R902 Q903
C664 C654 R653 R663 R923
R662 R661 R652
C665
J651
HEADPHONES
IC901
C913
Q661
C655
R904
C918 R665
Q651
C910 R905
C912
R657
Q652
R655
C909
R803
CNP909
Q902 R909 R908
Q901
R906
C911
R919
1-638-903
12
5·13·18
8
5
18
13
11
17
16
15
7·9·10·16·17
TO DSP BOARD CNP104 Ⓓ (See page 45)
【POWER AMP (A) BOARD】
C706 C702
C707
BLK PIN WHT PIN WHT BLK
CN801
C831
C802
R802
CN802
C705
R712 IC701 R702 C704
R711
L801 L871 R881
R880 R810
L851
R831
R705 C701 Q701 R701 D702 R704 R703 D703 R710
C821 C871 R821 C851 C801
R801 R851
R860
D701
R856 C822 R822
R871
R811 R861 L821
D822 D872
D802 D852
IC703
R830
C708
R713
D705 D704
R714 C712
R878 C834 C874
C852 R852 R872 C872
Q851
R808
R809
R828
C711 R708 R854
R853
R873
R825
Q801
R806 R805
R706
D706
R859
R879
C875
R829
C804
R803
C808
IC702
C709
R855 R856
C878
C858
R874
Q821
R827 R826 C828 C829
C824 R804 C805
C809
C710
R707
R857
C879
C859
Q871
R875 R876
R824
R823
R807
D801
R709
D851
D871
R877
D821
1-638-905
12
【POWER AMP (B) BOARD】
C823
IC821
C807
C806
C803
IC801
【POWER AMP (C) BOARD】
C853
IC851
C856
【POWER AMP (D) BOARD】
C857
C873
IC871
【POWER AMP (E) BOARD】
J891
SPEAKER
⊕ L ⊖ ⊕ R ⊖
TO SATELLITE UNIT IMPEDANCE 8−16Ω
TO BASS UNIT IMPEDANCE 6−16Ω
【SP (C) BOARD】
【SP (B) BOARD】
【SP (A) BOARD】
CN891
C891
R892
R891
−3
−1
C893
C892
−4
−2
R893
R894
C894
1-638-907
12
MODEL G, IT
FAN
18

2-7. SCHEMATIC DIAGRAM – JACK, POWER SUPPLY SECTION – • See page 9 to 15 for IC Pin Description and Page 1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7
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A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
TO DSP CNP104
D
(See page 43
[POWER AMP (A) BOARD]
CN801
GND6
LR5
LL4
HR3
HL2
GND1
C
IC801 SI18752
HL AMP
R805 0.22 2W
Q801 2SC1841
R808 100k
HL
B
IC821 SI18752
LL AMP
R825 0.22 2W
Q821 2SC1841
LL
D
IC851 SI18752
HR AMP
R855 0.22 2W
Q851 2SC1841
R858 100k
HR
E
IC871 SI18752
LR AMP
R875 0.22 2W
Q871 2SC1841
R878 100k
LR
[POWER B, C, D, E AMP BOARD]
Q801
Q821
Q851
Q871
OVER LOAD DETECT
IC801
IC821
IC851
IC871
POWER AMP
IC703 LM35
IC703
TEMPERATURE SENSOR
D802,852,822,872 1N4148M x 4
Q701 SWITCHING 2SA1175-HFE
D701 1N4148
D702 1N4148
SYSTEM CONTROL 1
TO TUNER
CNJ1
N0306
N0309
[JACK (C) BOARD]
SUPER WOOFER
J2
C3 0.01
C5 0.01
[JACK (D) BOARD]
OPTICAL DIGITAL
CD IN
IC1 GP1F34R
IC3 GP1F34T
DAT OUT
OUT – DAT – IN
IC2 GP1F34R
DAT IN
C2 0.01μF 16V
C1 10 50V
C7 0.01
ICP904 5A
ICP903 5A
L1
CNJ2
CNP5
CD IN
BG
CD
DAT OUT
BG
5.6V
TO CD TC
SYSTEM CONTROL 2
CNP6
5.6V OFF
BG
DAT OUT
DAT IN
BG
CD IN
16
AG
VG
VF
AUB
P OFF
+5.6V
+12V
BG
+30V
ST L
ST R
ACG
AC
FRQ
POWER OFF
L CD
R CD
R REC
L REC
L IN
R IN
RG
-30VG

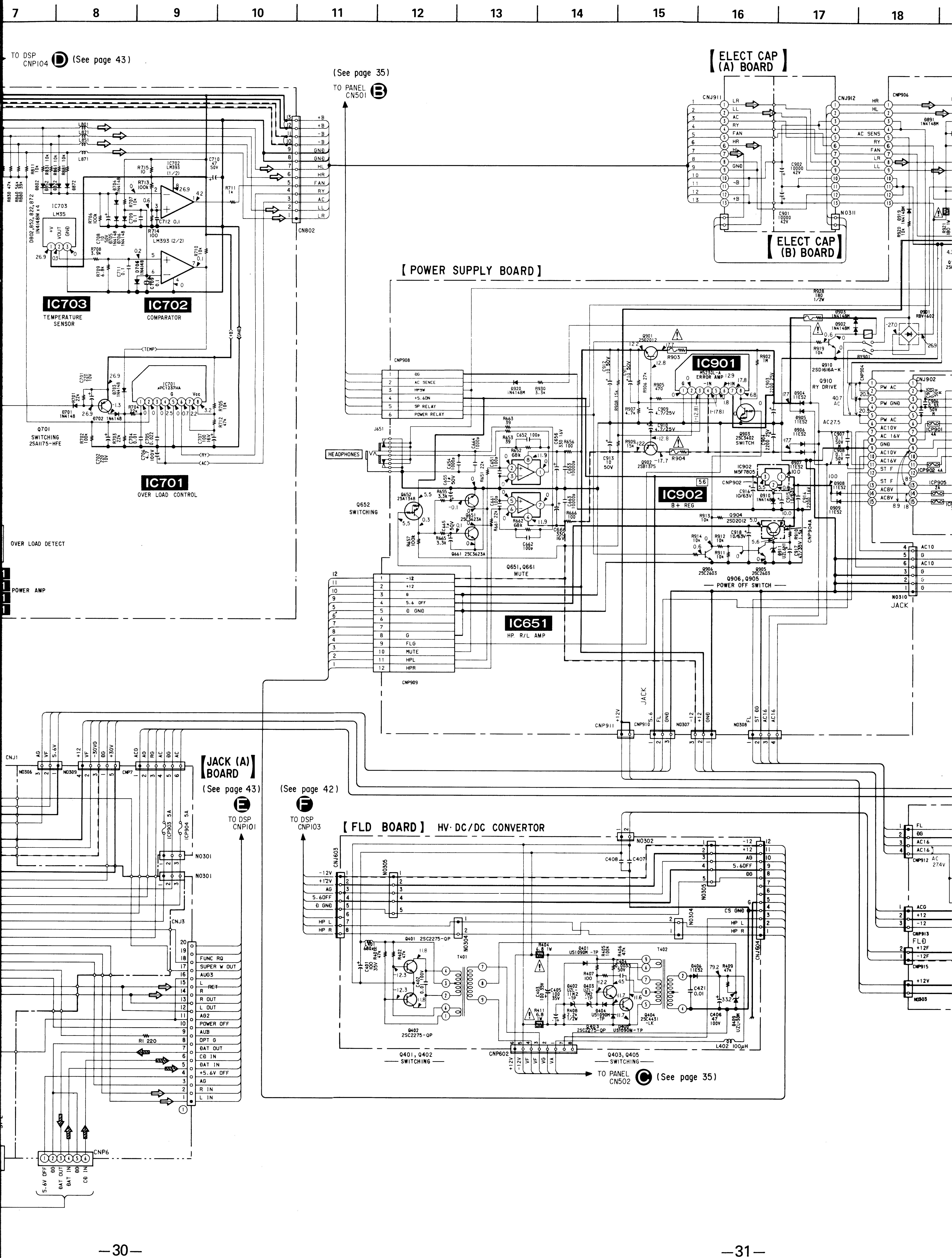
Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ━━ : B + Line.
- ━ ━ ━ : B − Line.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD, VIDEO 1
- Voltages are taken with a VOM (input impedance 10 MΩ).
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : sound signal
  - ⇨ : CD
  - ⇨ : digital out

Description and Page 18 to 20 for IC Block Diagrams.



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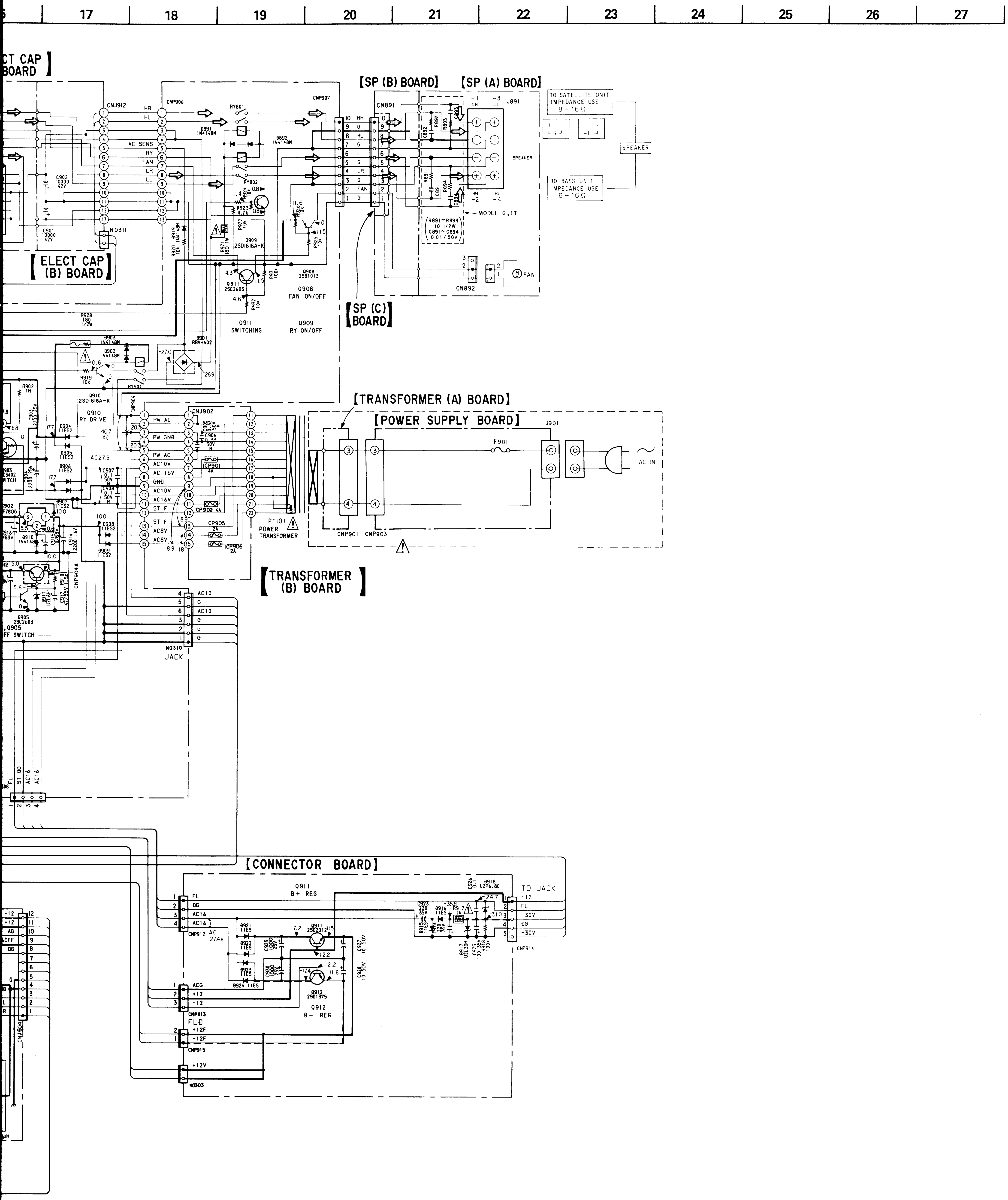
18
TO DSP CNP104 D (See page 43)
(See page 35) TO PANEL CN501 B
【ELECT CAP (A) BOARD】
【ELECT CAP (B) BOARD】
【POWER SUPPLY BOARD】
IC703 TEMPERATURE SENSOR
IC702 COMPARATOR
IC701 OVER LOAD CONTROL
Q701 SWITCHING 2SA1175-HFE
OVER LOAD DETECT
POWER AMP
CN802
CNP908
HEADPHONES
J651
Q652 SWITCHING
Q651, Q661 MUTE
IC651 HP R/L AMP
CNP909
IC901 ERROR AMP
IC902 B+ REG
Q910 RY DRIVE
Q906, Q905 — POWER OFF SWITCH —
N0310 JACK
CNP911
CNP910
N0307
N0308
【JACK (A) BOARD】
(See page 43) TO DSP CNP101 E
(See page 42) TO DSP CNP103 F
【FLD BOARD】 HV·DC/DC CONVERTOR
Q401, Q402 — SWITCHING —
Q403, Q405 — SWITCHING —
TO PANEL CN502 C (See page 35)
CNP602
CNJ603
CNJ604
CNJ3
CNP6
CNP7
N0306
N0309
N0301
CNP912
CNP913
CNP915
N0303
FUNC RQ
SUPER W OUT
AUG3
R OUT
L OUT
AG2
POWER OFF
AUB
OPT G
DAT OUT
CD IN
DAT IN
+5.6V OFF
AG
R IN
L IN


17
18
19
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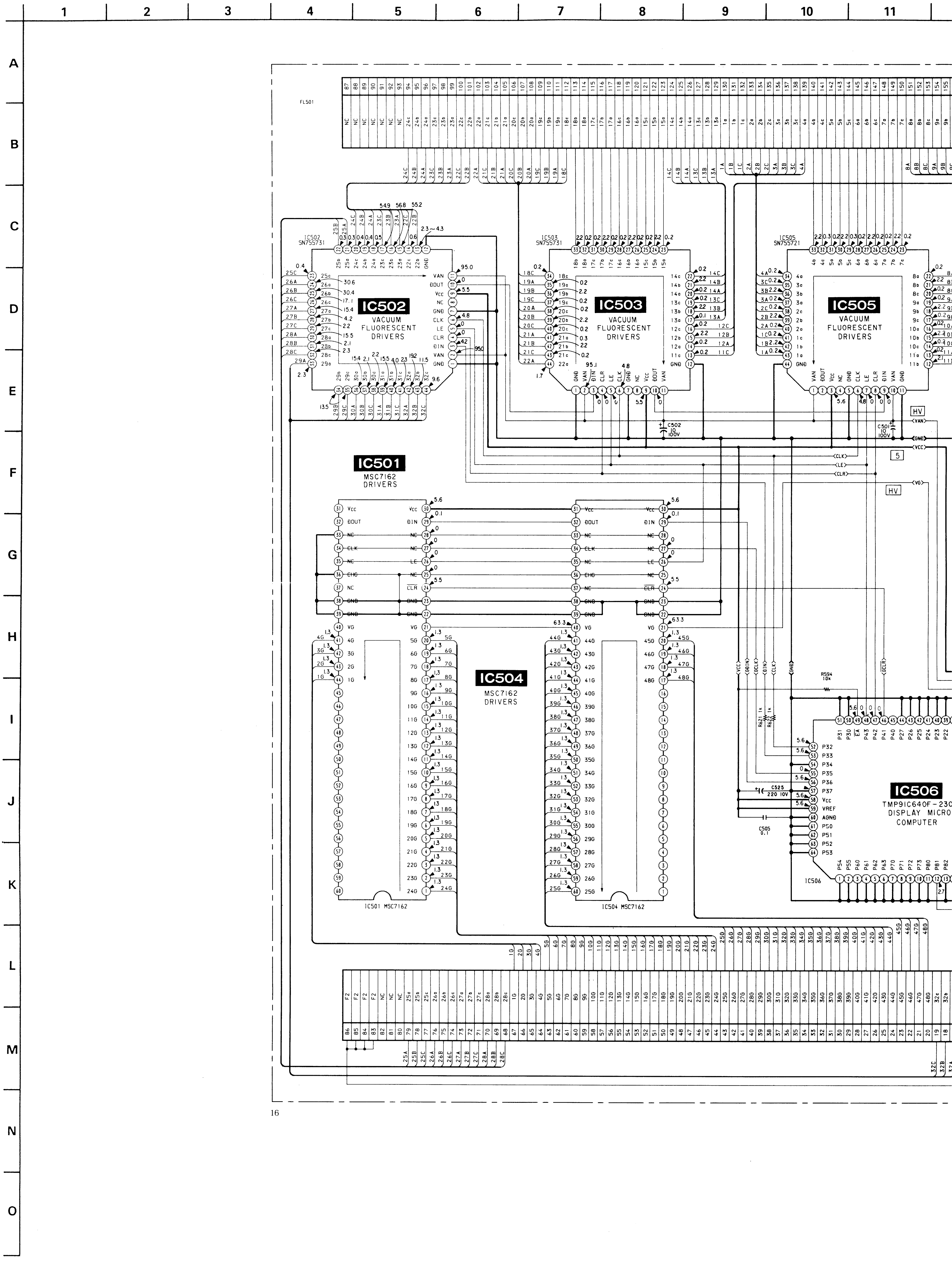
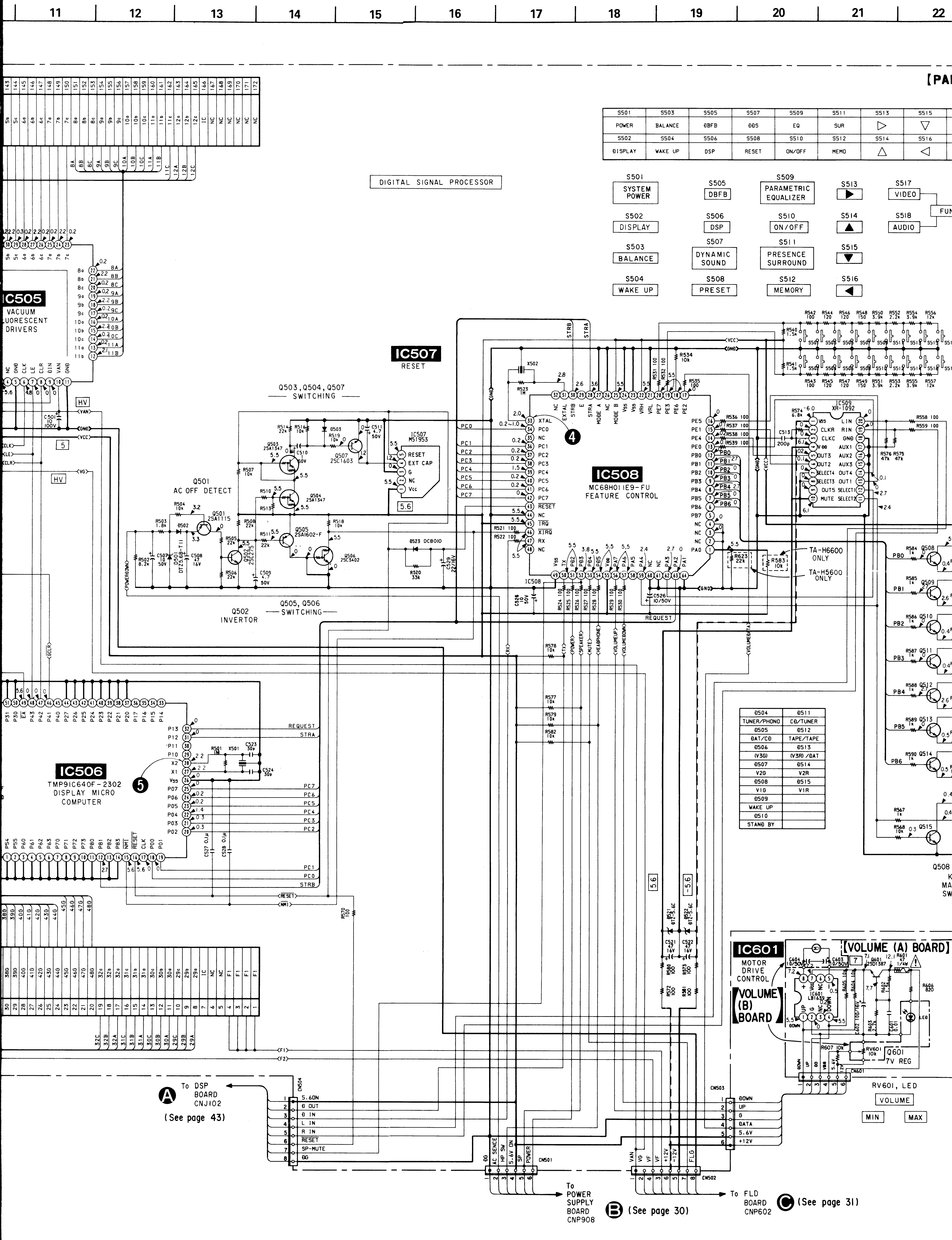
21
22
23
24
25
26
27
ELECT CAP (B) BOARD
CNJ912
CNP906
CNP907
RY801
RY802
D891 1N4148M
D892 1N4148M
C902 10000 42V
C901 10000 42V
AC SENS
RY
FAN
LR
LL
HR
HL
N0311
Q909 2SD1616A-K
Q911 2SC2603
Q908 2SB1013
Q908 FAN ON/OFF
Q911 SWITCHING
Q909 RY ON/OFF
R928 180 1/2W
D903 1N4148M
D902 1N4148M
D901 RBV-602
R919 10k
Q910 2SD1616A-K
Q910 RY DRIVE
RY901
SP (B) BOARD
SP (A) BOARD
SP (C) BOARD
CN891
CN892
J891
SPEAKER
FAN
MODEL G,IT
R891~R894 10 1/2W
C891~C894 0.01/50V
TO SATELLITE UNIT IMPEDANCE USE 8-16Ω
TO BASS UNIT IMPEDANCE USE 6-16Ω
TRANSFORMER (A) BOARD
POWER SUPPLY BOARD
J901
F901
AC IN
CNP901
CNP903
TRANSFORMER (B) BOARD
CNJ902
CNP904
PW AC
PW GND
AC10V
AC 16V
GND
AC16V
ST F
AC8V
ICP901 4A
ICP902 4A
ICP905 2A
ICP906 2A
PT101 POWER TRANSFORMER
N0310 JACK
AC10
G
CONNECTOR BOARD
Q911 B+ REG
Q912 2SB1375
Q912 B- REG
D918 UZP6.8C
TO JACK
+12
FL
-30V
ΘG
+30V
CNP914
CNP912
CNP913
FLD
+12F
-12F
CNP915
+12V
N0803
ACG
-12
AC16
CNJ604

2-8. SCHEMATIC DIAGRAM — PANEL SECTION — •See page 9 to 15 for IC Pin Description and Page 18 to 20 for IC Block Diagrams. See page 29 Schematic Diagram Not


FL501
IC502
SN755731
IC502
VACUUM
FLUORESCENT
DRIVERS
IC503
SN755731
IC503
VACUUM
FLUORESCENT
DRIVERS
IC505
SN755721
IC505
VACUUM
FLUORESCENT
DRIVERS
IC501
MSC7162
DRIVERS
IC504
MSC7162
DRIVERS
IC501 MSC7162
IC504 MSC7162
IC506
TMP91C640F-230
DISPLAY MICRO
COMPUTER
C502
10
100V
C501
10
100V
C525
220 10V
C505
0.1
R594
10k
R621 1k
R622 1k
HV
5
VAN
GND
VCC
CLK
LE
CLR
VG
16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21
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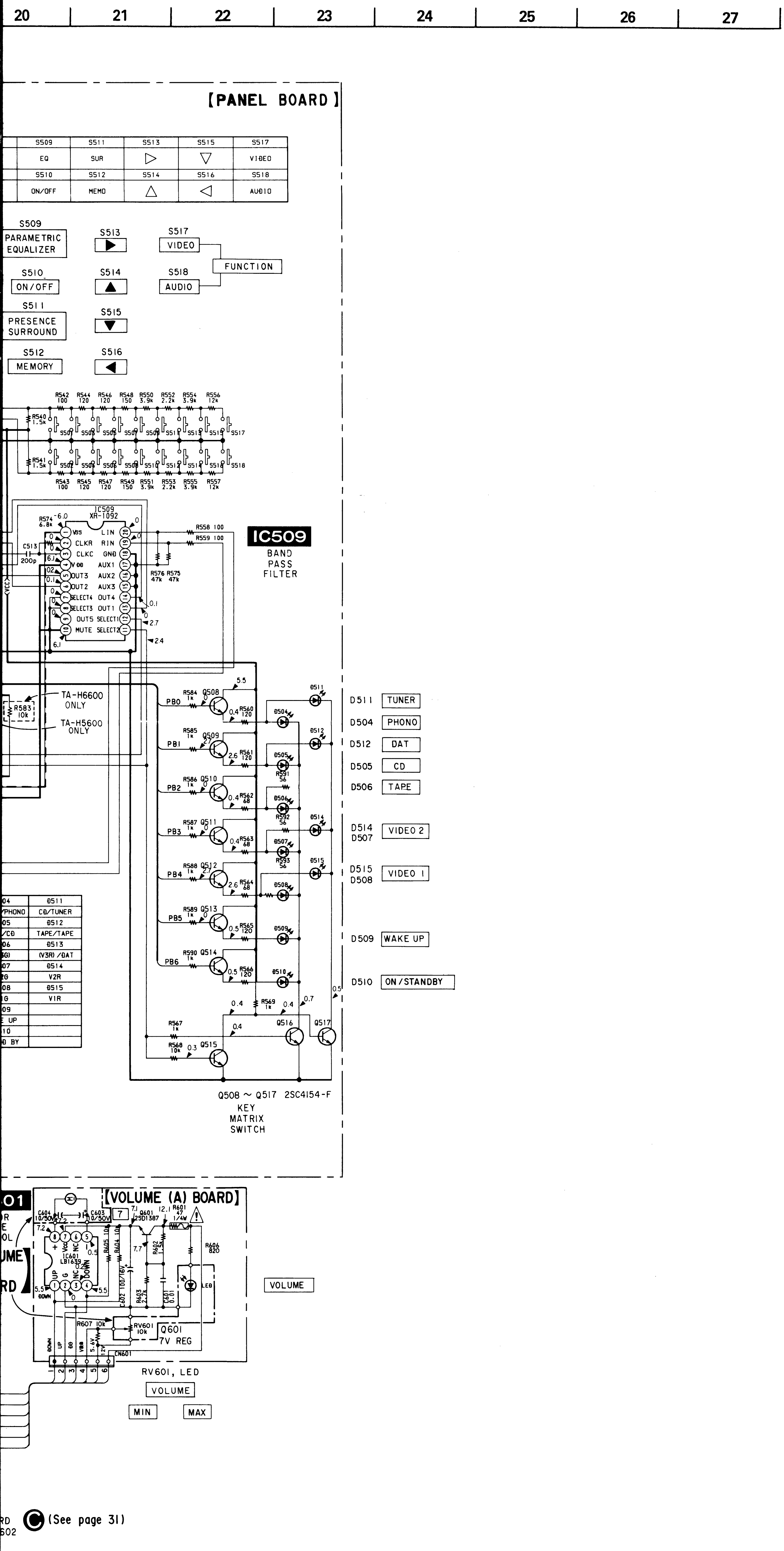
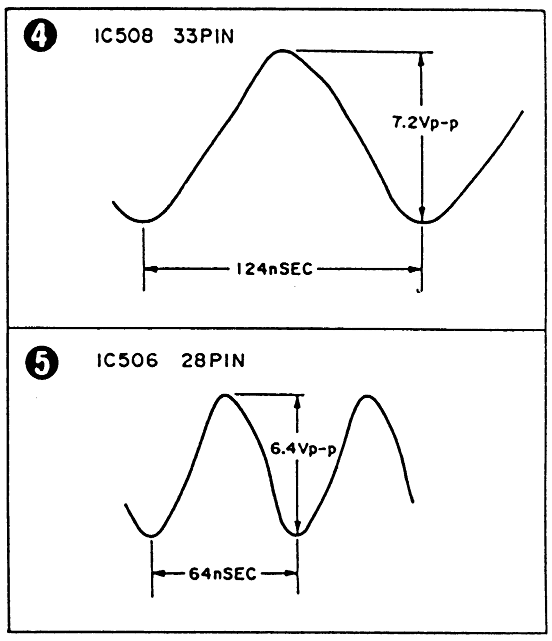
[PA
IC505
VACUUM
UORESCENT
DRIVERS
IC507
RESET
IC507
M51953
Q503, Q504, Q507
SWITCHING
Q501
AC OFF DETECT
Q502
INVERTOR
Q505, Q506
SWITCHING
DIGITAL SIGNAL PROCESSOR
IC508
MC68HO1IE9-FU
FEATURE CONTROL
4
IC509
XR-1092
TA-H6600
ONLY
TA-H5600
ONLY
IC506
TMP91C640F-2302
DISPLAY MICRO
COMPUTER
5
S501
SYSTEM POWER
S502
DISPLAY
S503
BALANCE
S504
WAKE UP
S505
DBFB
S506
DSP
S507
DYNAMIC SOUND
S508
PRESET
S509
PARAMETRIC EQUALIZER
S510
ON/OFF
S511
PRESENCE SURROUNDING
S512
MEMORY
S513
S514
S515
S516
S517
VIDEO
S518
AUDIO
FUN
IC601
MOTOR
DRIVE
CONTROL
[VOLUME (A) BOARD]
[VOLUME (B) BOARD]
Q601
7V REG
RV601, LED
VOLUME
MIN
MAX
Q508
K
MA
SW
CN504
CN503
CN501
CN502
CN601
REQUEST
STRA
STRB
RESET
NMI
A
To DSP
BOARD
CNJ102
(See page 43)
B
To
POWER
SUPPLY
BOARD
CNP908
(See page 30)
C
To FLD
BOARD
CNP602
(See page 31)

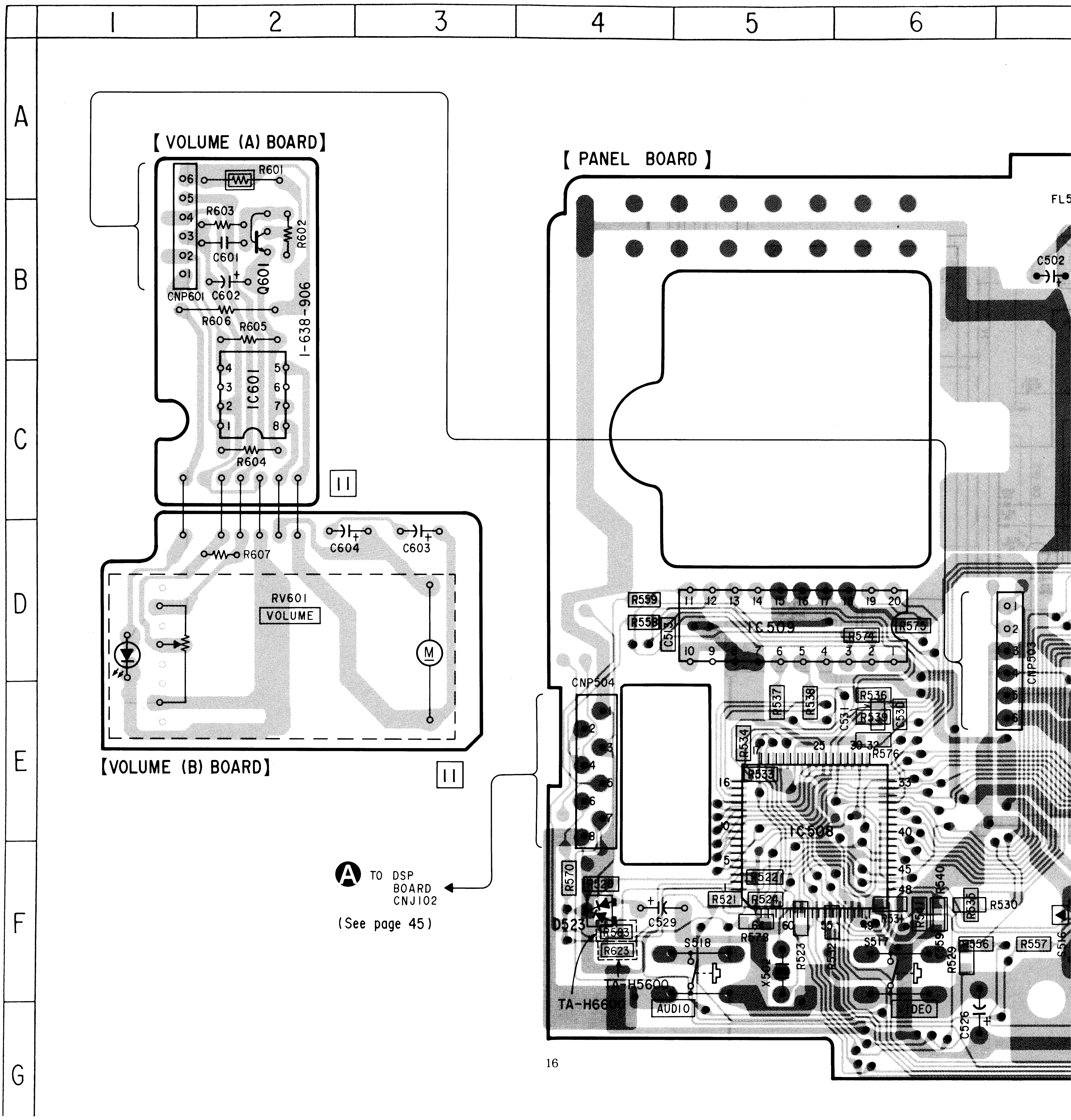
S501	S503	S505	S507	S509	S511	S513	S515
POWER	BALANCE	DBFB	DDS	EQ	SUR	▷	▽
S502	S504	S506	S508	S510	S512	S514	S516
DISPLAY	WAKE UP	DSP	RESET	ON/OFF	MEMO	△	◁

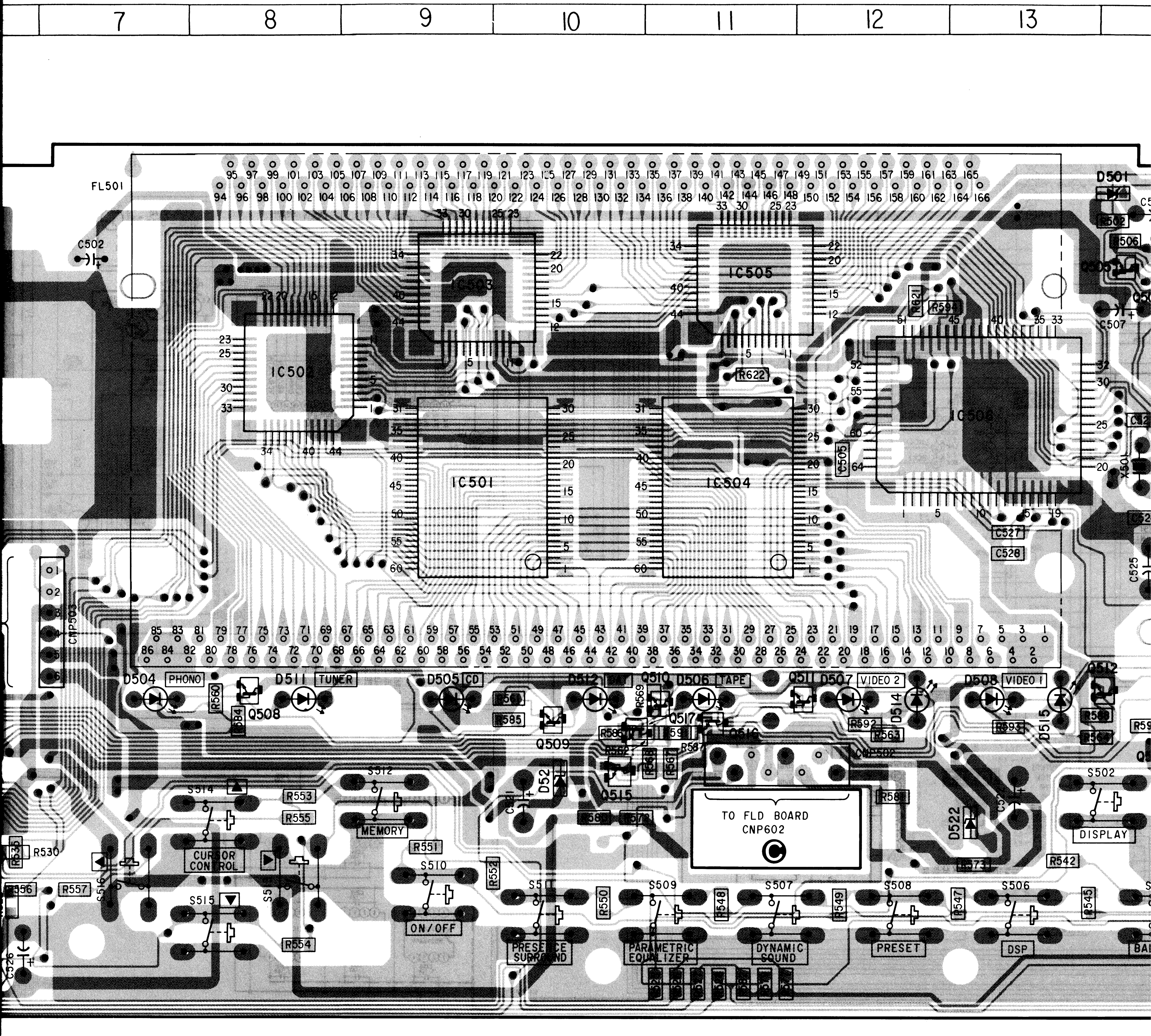
Q504	Q511
TUNER/PHONO	CD/TUNER
Q505	Q512
DAT/CD	TAPE/TAPE
Q506	Q513
(V3G)	(V3R)/DAT
Q507	Q514
V2G	V2R
Q508	Q515
V1G	V1R
Q509	
WAKE UP	
Q510	
STAND BY	

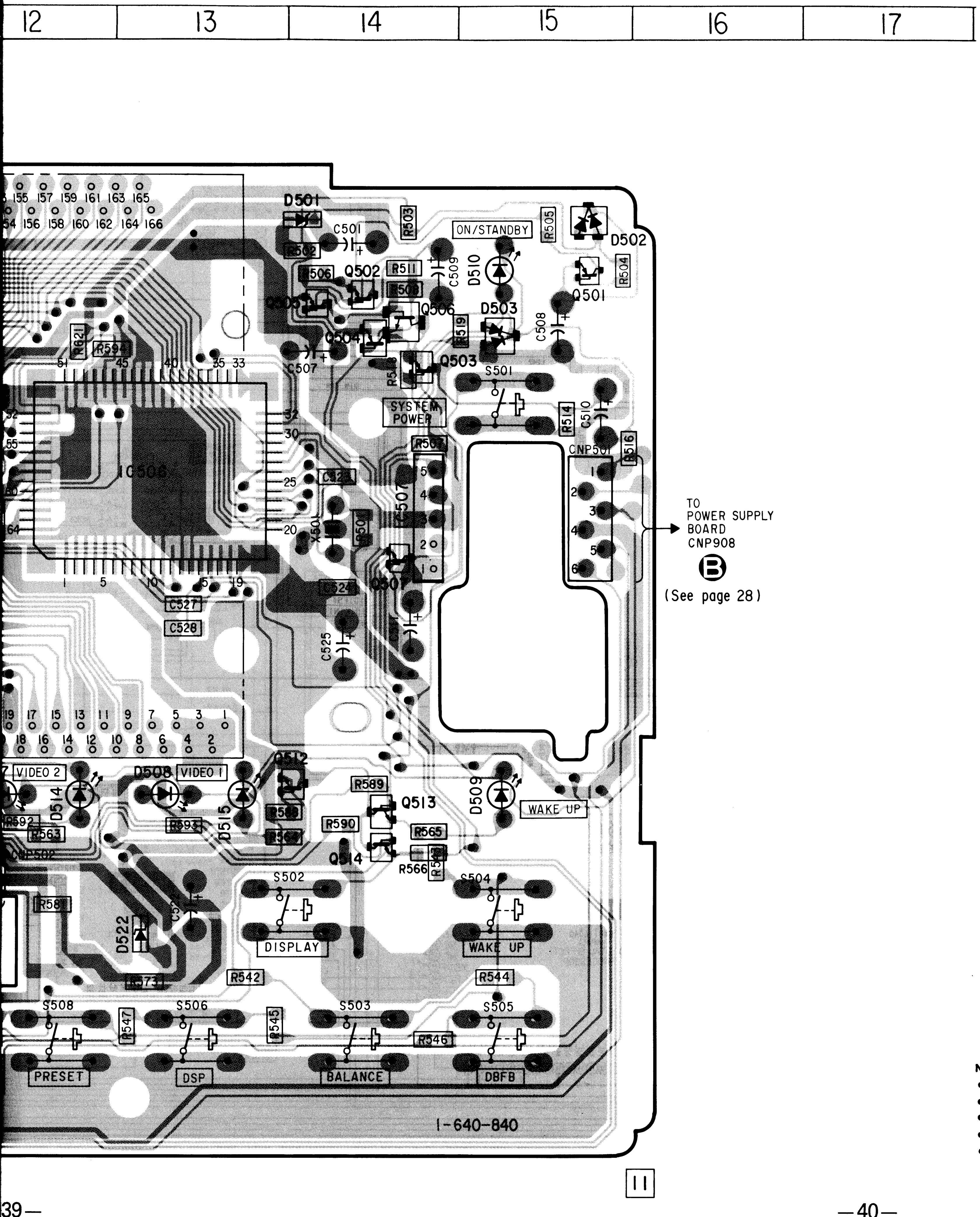

20
21
22
23
24
25
26
27
[PANEL BOARD]
S509
S511
S513
S515
S517
EQ
SUR
VIDEO
S510
S512
S514
S516
S518
ON/OFF
MEMO
AUDIO
S509 PARAMETRIC EQUALIZER
S513
S517 VIDEO
FUNCTION
S510 ON/OFF
S514
S518 AUDIO
S511 PRESENCE SURROUND
S515
S512 MEMORY
S516
IC509 XR-1092
IC509 BAND PASS FILTER
R558 100
R559 100
R576 47k
R575 47k
TA-H6600 ONLY
TA-H5600 ONLY
R583 10k
PB0
PB1
PB2
PB3
PB4
PB5
PB6
Q508
Q509
Q510
Q511
Q512
Q513
Q514
Q515
Q516
Q517
D511 TUNER
D504 PHONO
D512 DAT
D505 CD
D506 TAPE
D514 D507 VIDEO 2
D515 D508 VIDEO 1
D509 WAKE UP
D510 ON/STANDBY
Q508 ~ Q517 2SC4154-F
KEY MATRIX SWITCH
[VOLUME (A) BOARD]
IC601 LB1639
Q601 2SD1387
R601 47 1/4W
R606 820
RV601 10k
Q601 7V REG
CN601
VOLUME
RV601, LED
VOLUME
MIN
MAX
(See page 31)


④ IC508 33PIN
7.2Vp-p
124nSEC
⑤ IC506 28PIN
6.4Vp-p
64nSEC

2-9. PRINTED WIRING BOARDS – PANEL SECTION – • **See page 16 to 17 for Circuit Boards Location and Semiconductor Lead Layouts.**


1
2
3
4
5
6
A
B
C
D
E
F
G
[VOLUME (A) BOARD]
R601
R603
R602
C601
Q601
CNP601
C602
R606
R605
1-638-906
IC601
R604
11
R607
C604
C603
RV601
VOLUME
M
[VOLUME (B) BOARD]
11
A
TO DSP BOARD CNJ102
(See page 45)
[PANEL BOARD]
FL5
C502
R559
R558
C513
IC509
R574
R575
CNP503
CNP504
R537
R538
R536
C531
R539
C530
R534
R576
R533
IC508
R522
R570
R520
D523
R583
R623
R521
R524
C529
S518
R578
X501
R523
S517
R541
R540
R535
R530
R529
R556
R557
C526
C516
TA-H5600
TA-H6600
AUDIO
VIDEO
16


7
8
9
10
11
12
13
FL501
C502
IC502
IC503
IC505
IC501
IC504
IC508
R622
R621
R594
C505
C507
C527
C528
C525
X501
D501
R502
R506
Q505
CNP503
D504
PHONO
R560
Q508
D511
TUNER
D505
CD
D512
Q510
D506
TAPE
Q511
D507
VIDEO 2
D514
D508
VIDEO 1
D515
Q512
R569
R595
Q509
Q517
Q516
R592
R563
R593
R587
CNP502
Q515
D521
D522
R583
R573
S512
S514
R553
R555
MEMORY
R551
CURSOR CONTROL
R530
R556
R557
S515
S516
R554
S510
ON/OFF
R552
S511
R550
PRESENCE SURROUND
S509
PARAMETRIC EQUALIZER
R548
S507
DYNAMIC SOUND
R549
S508
PRESET
R547
S506
DSP
R545
S502
DISPLAY
R542
TO FLD BOARD
CNP602
C
C526


12
13
14
15
16
17
D501
C501
R503
ON/STANDBY
R505
D502
R502
R506
Q502
R511
R509
C509
D510
R504
Q501
Q505
Q506
D503
R519
C508
R621
R594
Q504
C507
R518
Q503
S501
SYSTEM POWER
R514
C510
R516
CNP501
IC506
R567
C523
IC507
X501
R504
C524
Q507
C527
C528
C525
TO
POWER SUPPLY
BOARD
CNP908
B
(See page 28)
VIDEO 2
D508
VIDEO 1
Q512
D514
D515
R589
Q513
D509
WAKE UP
R592
R593
R588
R590
R565
R563
R560
Q514
R566
CNP502
S502
S504
R581
D522
DISPLAY
WAKE UP
R573
R542
R544
S508
S506
S503
S505
R547
R545
R546
PRESET
DSP
BALANCE
DBFB
1-640-840
11

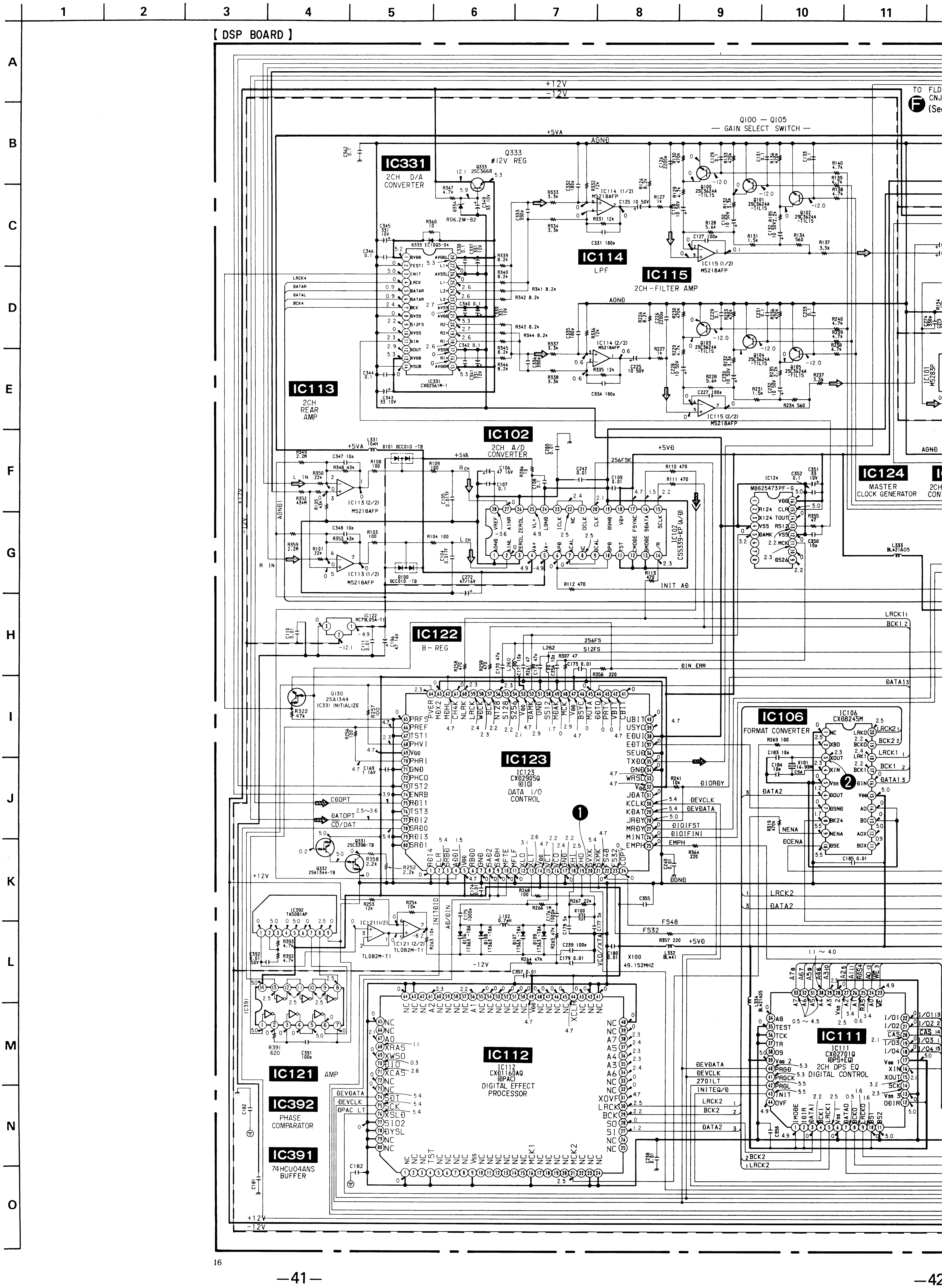
· Semiconductor Location

Ref. No.	Location
D501	B-14
D502	B-15
D503	B-15
D504	E-7
D505	E-9
D506	E-11
D507	E-12
D508	E-13
D509	E-15
D510	B-15
D511	E-18
D512	E-10
D513	E-11
D514	E-12
D515	E-13
D521	E-10
D522	F-13
D523	E-4
IC501	C-9
IC502	C-8
IC503	B-9
IC504	C-11
IC505	B-11
IC506	C-13
IC507	C-14
IC508	E-5
IC509	D-5
Q501	B-15
Q502	B-14
Q503	B-14
Q504	B-14
Q505	B-14
Q506	B-14
Q507	D-14
Q508	E-8
Q509	E-10
Q510	E-11
Q511	E-12
Q512	E-14
Q513	E-14
Q514	E-14
Q515	E-10
Q516	E-11
Q517	E-11

Note on Mounting Diagram :

- ○—— : Parts extracted from the component side.
- ⬚⇤ : Indicates side identified with part number.
- ● : Through hole.
- ▩ : Pattern on the side which is seen.
- ▒ : Pattern of the rear side.

2-10. SCHEMATIC DIAGRAM — DSP SECTION — • See page 9 to 15 for IC Pin Description and Page 18 to 20 for IC Block Diagrams. See page 29 Schematic Diagram Note



1
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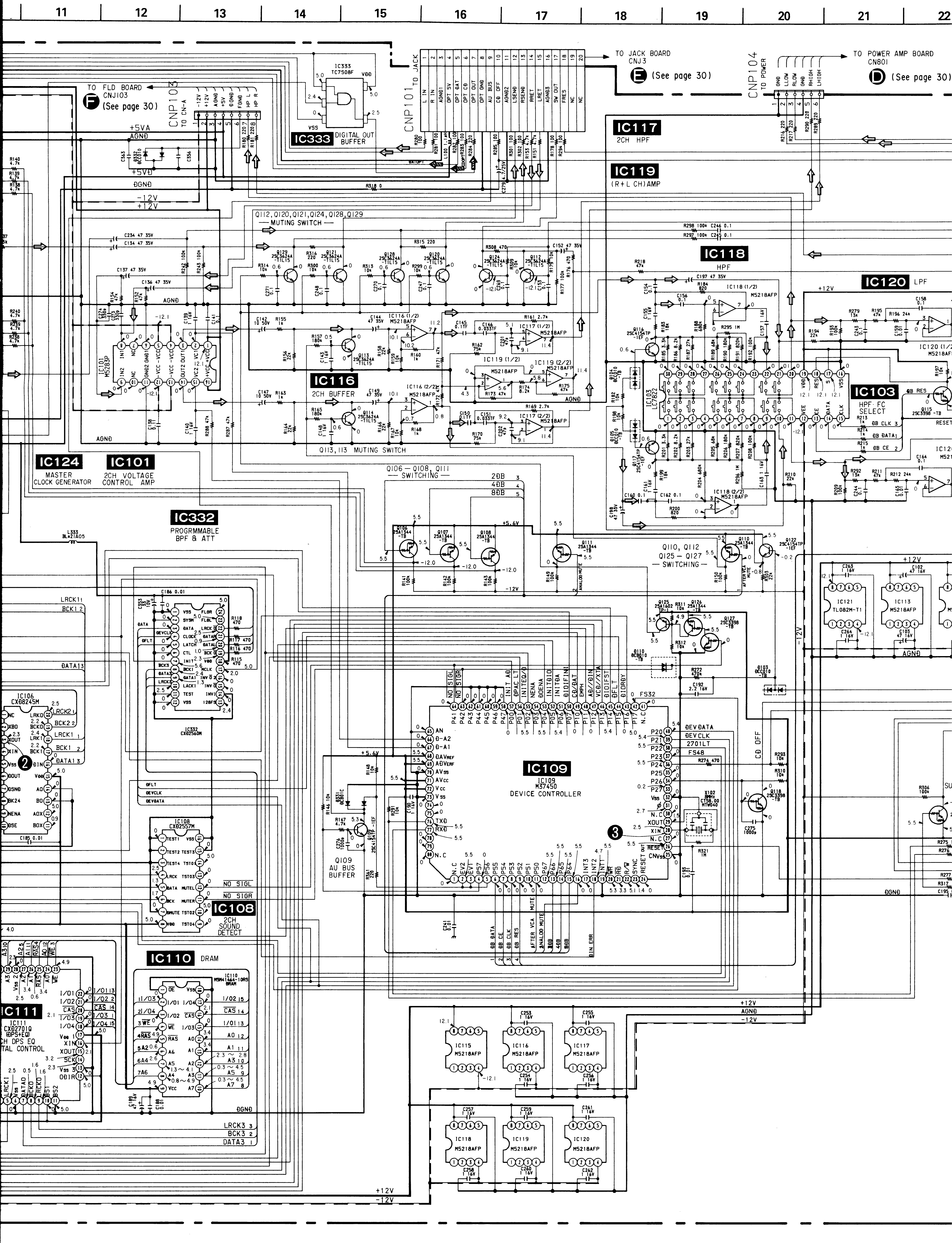
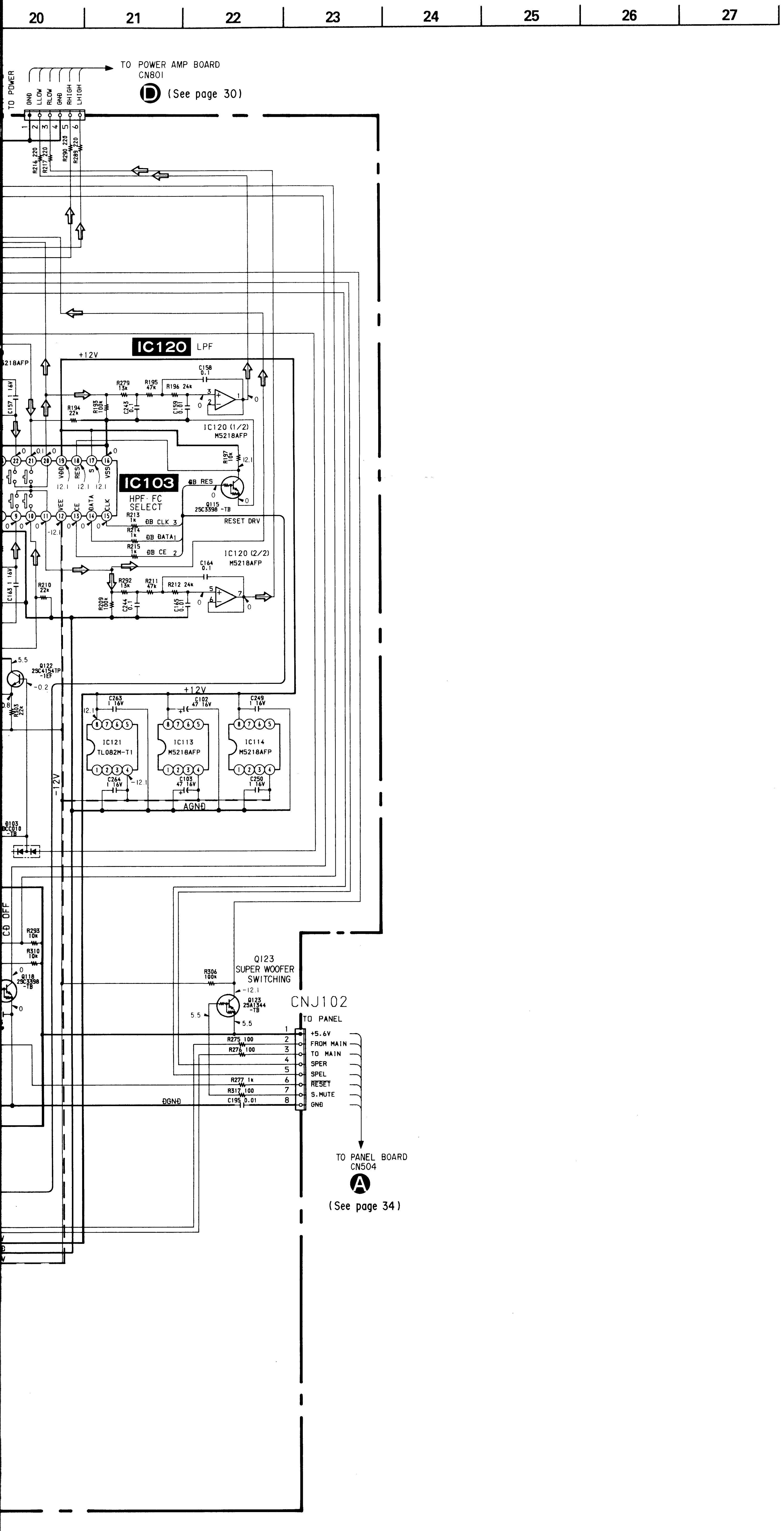
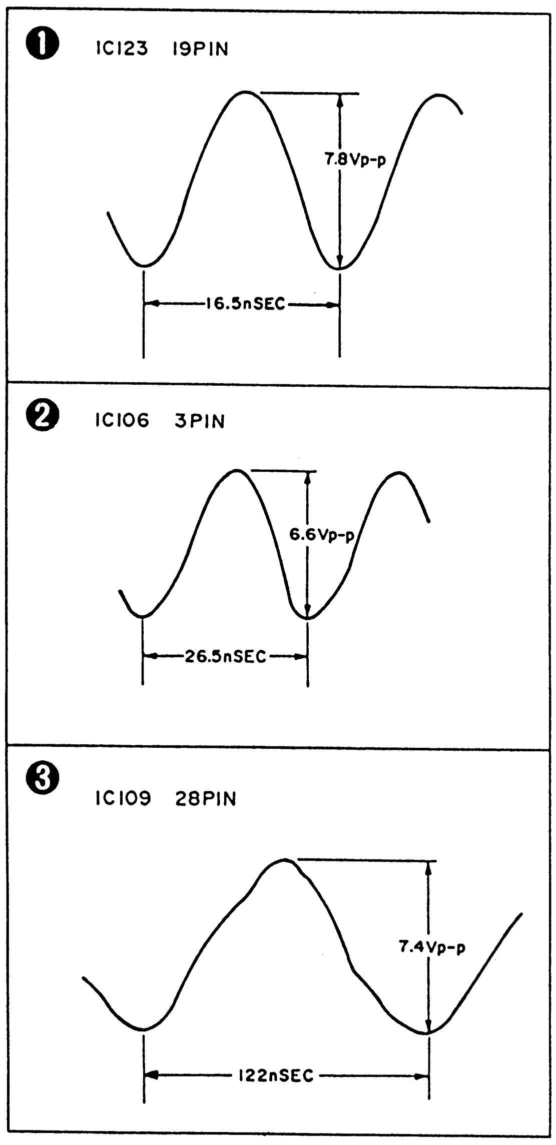
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
[DSP BOARD]
+12V
-12V
+5VA
AGND
TO FLD
Q100 — Q105
— GAIN SELECT SWITCH —
IC331
2CH D/A CONVERTER
Q333
12V REG
IC114
LPF
IC115
2CH-FILTER AMP
IC113
2CH REAR AMP
IC102
2CH A/D CONVERTER
IC124
MASTER CLOCK GENERATOR
IC122
B-REG
IC123
CXD2905Q (DID)
DATA I/O CONTROL
IC106
FORMAT CONVERTER
CXD8245M
IC111
CXD2701Q (DPS+EQ)
2CH DPS EQ DIGITAL CONTROL
IC112
CXD1160AQ (DPAC)
DIGITAL EFFECT PROCESSOR
IC121
AMP
IC392
PHASE COMPARATOR
IC391
74HCU04ANS BUFFER
L IN
R IN
Q130
2SA1344
IC331 INITIALIZE
X100
49.152MHZ
+5VD
DGND
1
2

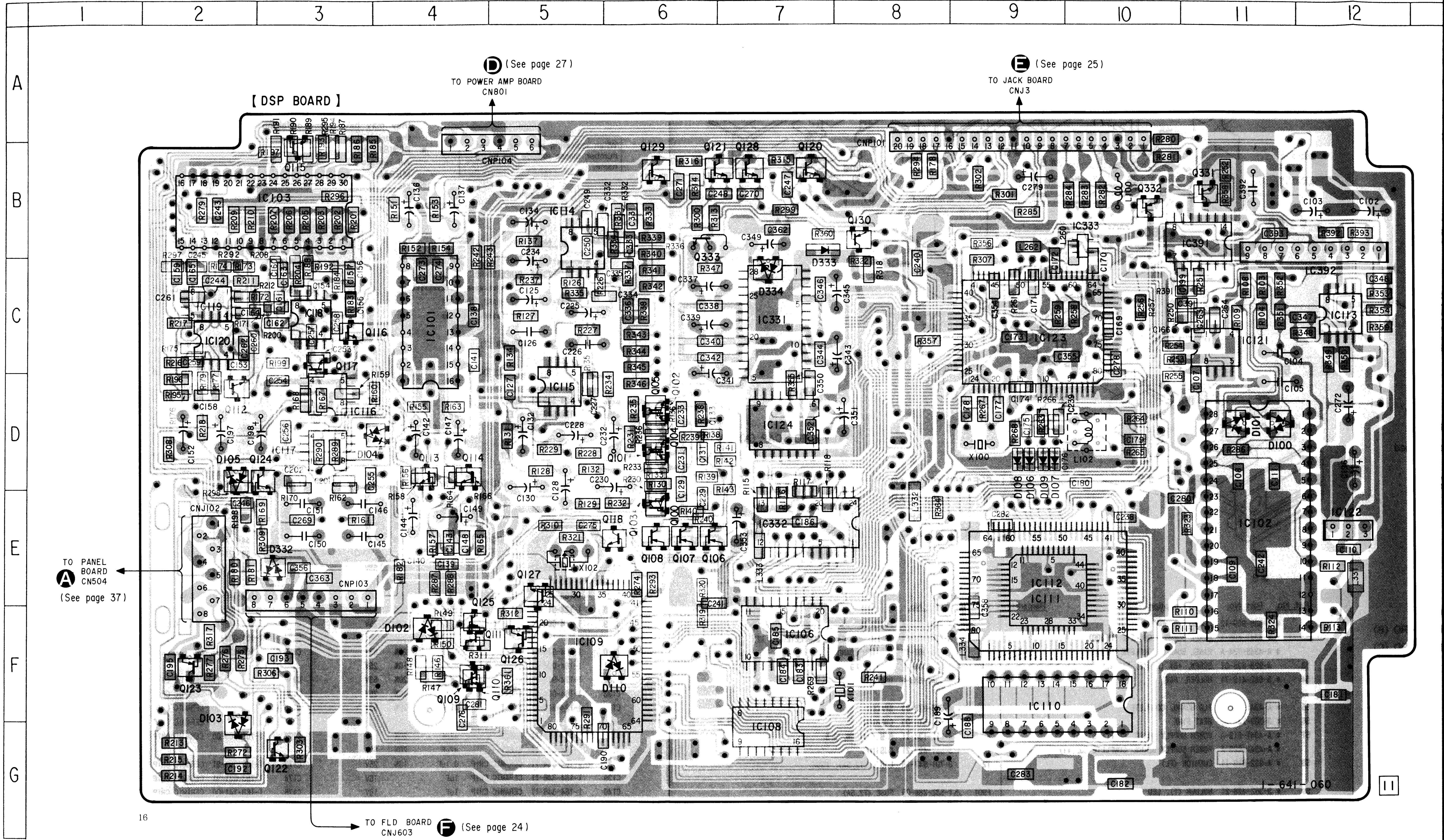
chematic Diagram Note.


11
12
13
14
15
16
17
18
19
20
21
22
TO JACK BOARD CNJ3
E (See page 30)
TO POWER AMP BOARD CN801
D (See page 30)
TO FLD BOARD CNJ103
F (See page 30)
CNP103 TO CN-A
CNP101 TO JACK
CNP104 TO POWER
IC333 TC7S08F
IC333 DIGITAL OUT BUFFER
IC117 2CH HPF
IC119 (R+L CH) AMP
IC118 HPF
IC120 LPF
IC116 2CH BUFFER
IC103 HPF FC SELECT
IC103 LC7822
IC101 M5283P
IC124 MASTER CLOCK GENERATOR
IC101 2CH VOLTAGE CONTROL AMP
IC332 PROGRMMABLE BPF & ATT
IC332 CXD2560M
Q112, Q120, Q121, Q124, Q128, Q129 — MUTING SWITCH —
Q113, 113 MUTING SWITCH
Q106 – Q108, Q111 — SWITCHING —
Q110, Q112 Q125 – Q127 — SWITCHING —
IC106 CXD8245M
IC108 CXD2557M
IC108 2CH SOUND DETECT
IC109 M37450
IC109 DEVICE CONTROLLER
Q109 AU BUS BUFFER
IC110 DRAM
IC110 MSM41464-10RS DRAM
IC111 CXD2701Q (DPS+EQ) CH DPS EQ TAL CONTROL
IC121 TL082M-T1
IC113 M5218AFP
IC115 M5218AFP
IC116 M5218AFP
IC117 M5218AFP
IC118 M5218AFP
IC119 M5218AFP
IC120 M5218AFP
+5VA
AGND
+5VD
DGND
-12V
+12V
LRCK3
BCK3
DATA3
LRCK1
BCK1
DATA13
CD OFF


20
21
22
23
24
25
26
27
TO POWER AMP BOARD
CN801
D
(See page 30)
TO POWER
GND
LLOW
RLOW
GND
RHIGH
LHIGH
R216 220
R217 220
R290 220
R289 220
IC120
LPF
+12V
C158 0.1
R279 13k
R195 47k
R196 24k
R194 22k
R193 100k
C243 0.1
C159 0.01
IC120 (1/2)
M5218AFP
R197 10k
IC103
HPF·FC SELECT
VDD
RES
S
VSS
VEE
CE
DATA
CLK
ØB RES
Q115
2SC3398 -TB
RESET DRV
R213 1k
ØB CLK
R214 1k
ØB DATA
R215 1k
ØB CE
IC120 (2/2)
M5218AFP
C164 0.1
R292 13k
R211 47k
R212 24k
R209 100k
C244 0.1
C165 0.01
R210 22k
C157 1 16V
C163 1 16V
Q122
2SC4154TP -1EF
R303 22k
+12V
C263 1 16V
C102 47 16V
C249 1 16V
IC121
TL082M-T1
IC113
M5218AFP
IC114
M5218AFP
C264 1 16V
C103 47 16V
C250 1 16V
AGND
-12V
D103
DCC010
-TB
CD OFF
R293 10k
R310 10k
Q118
2SC3398 -TB
Q123
SUPER WOOFER SWITCHING
R306 100k
Q123
2SA1344 -TB
CNJ102
TO PANEL
R275 100
R276 100
R277 1k
R317 100
C195 0.01
DGND
+5.6V
FROM MAIN
TO MAIN
SPER
SPEL
RESET
S.MUTE
GND
TO PANEL BOARD
CN504
A
(See page 34)


❶ IC123 19PIN
7.8Vp-p
16.5nSEC
❷ IC106 3PIN
6.6Vp-p
26.5nSEC
❸ IC109 28PIN
7.4Vp-p
122nSEC

2-11. PRINTED WIRING BOARDS – DSP SECTION – • See page 16 to 17 for Circuit Boards Location and Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
【DSP BOARD】
CNP104
CNP101
CNJ102
CNP103
IC101
IC102
IC103
IC106
IC108
IC109
IC110
IC111
IC112
IC113
IC114
IC115
IC116
IC117
IC118
IC119
IC120
IC121
IC122
IC123
IC124
IC331
IC332
IC333
IC391
IC392
Q101
Q102
Q103
Q104
Q105
Q106
Q107
Q108
Q109
Q110
Q111
Q112
Q113
Q114
Q115
Q116
Q117
Q118
Q120
Q121
Q122
Q123
Q124
Q125
Q126
Q127
Q128
Q129
Q130
Q331
Q332
Q333
D100
D101
D102
D103
D104
D105
D106
D107
D108
D109
D110
D332
D333
D334
X100
X101
X102
L102
1-641-060
11
16

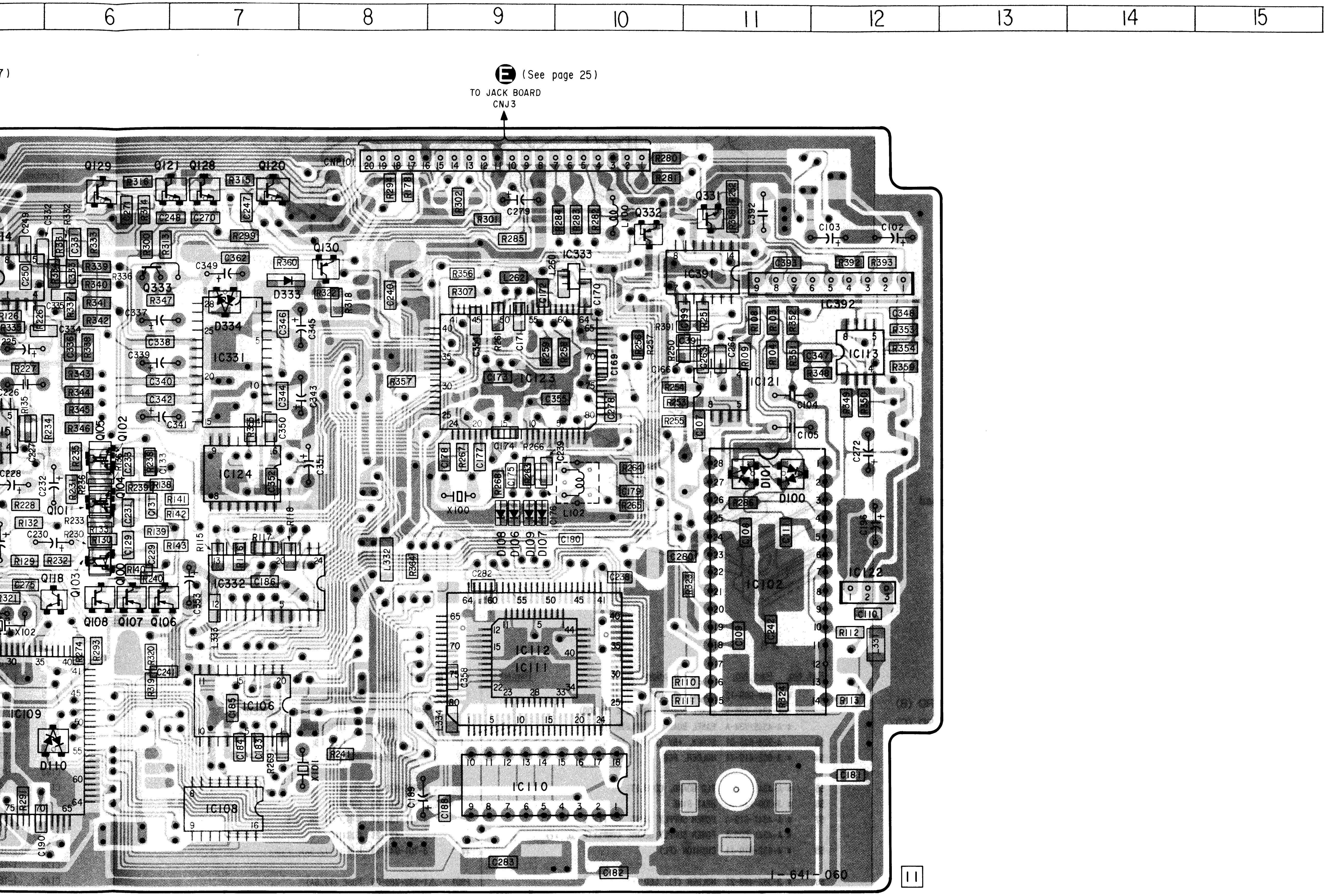
Ⓓ (See page 27)
TO POWER AMP BOARD
CN801

Ⓔ (See page 25)
TO JACK BOARD
CNJ3

TO PANEL BOARD
Ⓐ CN504
(See page 37)

TO FLD BOARD
CNJ603
Ⓕ (See page 24)

tion and Semiconductor Lead Layouts.


6
7
8
9
10
11
12
13
14
15
E (See page 25)
TO JACK BOARD
CNJ3
CNP101
Q129
Q121
Q128
Q120
Q130
Q331
Q332
Q333
D333
D334
IC331
IC333
IC391
IC392
IC123
IC121
IC113
IC124
IC332
IC102
IC122
IC112
IC111
IC106
IC110
IC108
IC109
D110
D100
D101
Q101
Q102
Q103
Q104
Q105
Q106
Q107
Q108
Q118
X100
X101
X102
L102
1-641-060
11

· Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D100	D-11	Q125	F-4
D101	D-11	Q126	F-5
D102	F-4	Q127	E-5
D103	G-2	Q128	B-7
D104	D-4	Q129	B-6
D105	D-2	Q130	B-8
D106	D-9	Q331	B-11
D107	D-9	Q332	B-10
D108	D-9	Q333	B-6
D109	D-9		
D110	F-6		
D332	E-3		
D333	B-7		
D334	C-7		
IC101	C-4		
IC102	E-11		
IC103	B-3		
IC106	F-7		
IC108	G-7		
IC109	F-5		
IC110	F-9		
IC111	F-9		
IC112	E-9		
IC113	C-12		
IC114	B-5		
IC115	D-5		
IC116	D-3		
IC117	D-3		
IC118	C-3		
IC119	C-2		
IC120	C-2		
IC121	C-11		
IC122	E-12		
IC123	C-9		
IC124	D-7		
IC331	C-7		
IC332	E-7		
IC333	B-10		
IC391	B-11		
IC392	B-12		
Q100	E-6		
Q101	D-6		
Q102	D-6		
Q103	E-6		
Q104	D-6		
Q105	D-6		
Q106	E-6		
Q107	E-6		
Q108	E-6		
Q109	F-4		
Q110	F-4		
Q111	F-4		
Q112	D-2		
Q113	D-4		
Q114	D-4		
Q115	B-3		
Q116	C-3		
Q117	C-3		
Q118	E-6		
Q120	B-7		
Q121	B-7		
Q122	G-3		
Q123	F-2		
Q124	D-3		

Note on Mounting Diagram :

- ○—— : Parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

SECTION 3
EXPLODED VIEWS

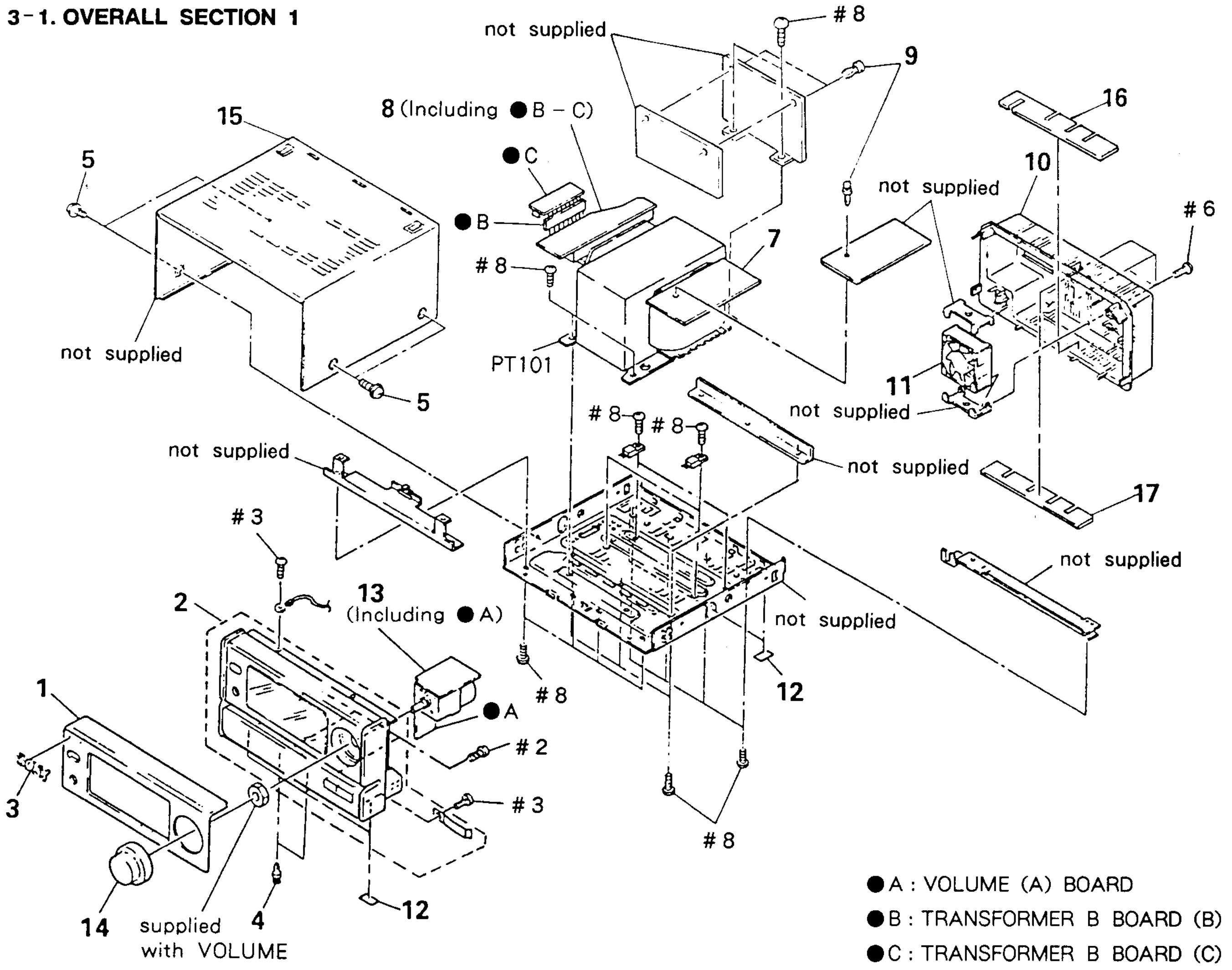
NOTE :

- – XX, – X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- G : Germany model
  IT : Itallian model

3-1. OVERALL SECTION 1

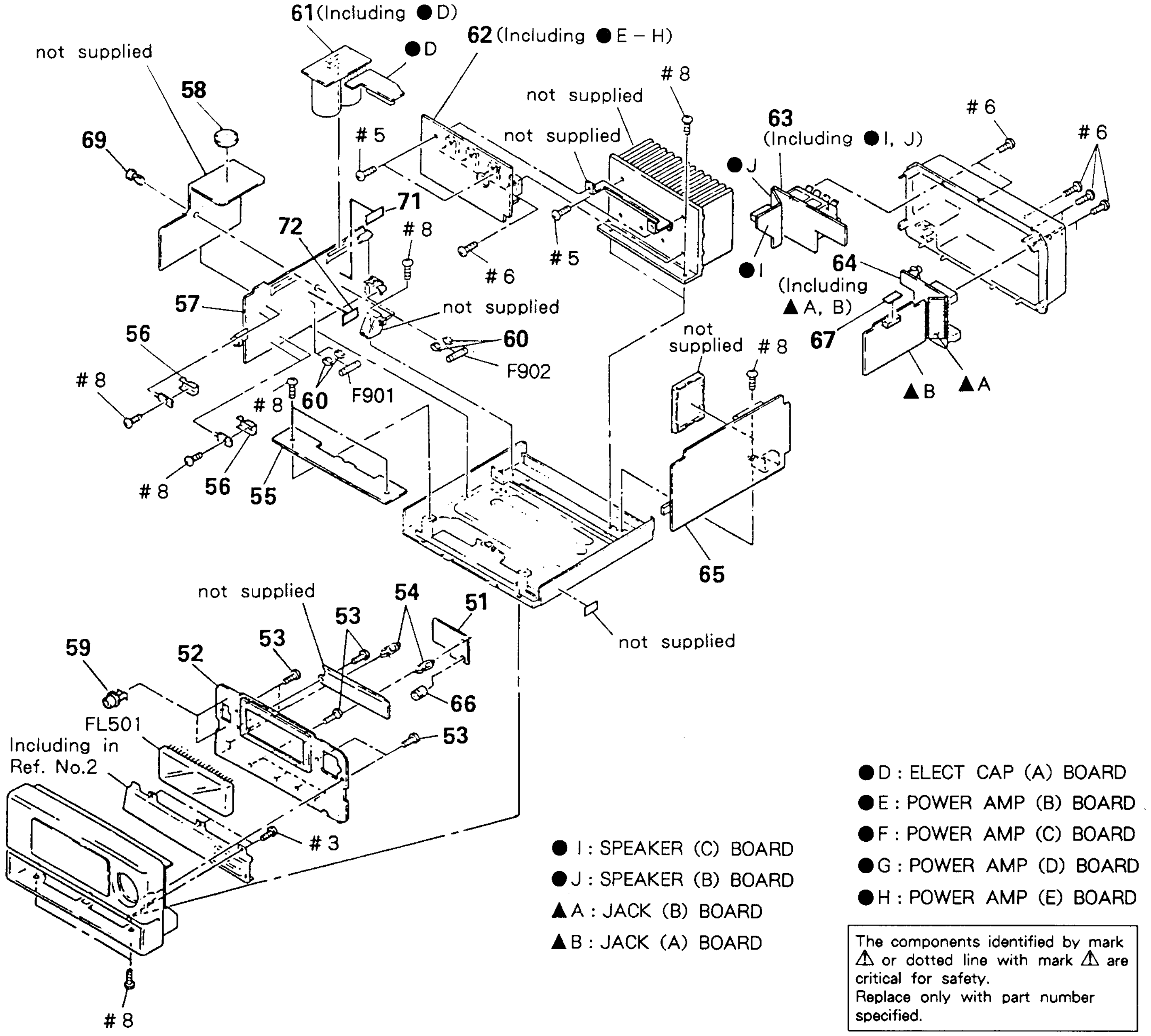

not supplied
# 8
9
15
8 (Including ●B – C)
16
5
●C
●B
# 8
7
not supplied
10
# 6
not supplied
PT101
11
5
# 8 # 8
not supplied
not supplied
not supplied
17
# 3
not supplied
2
13
(Including ●A)
not supplied
1
●A
# 8
12
# 2
# 3
3
# 8
14
supplied with VOLUME
4
12

●A : VOLUME (A) BOARD
●B : TRANSFORMER B BOARD (B)
●C : TRANSFORMER B BOARD (C)

Ref. No.	Part No.	Description	Remarks
1	X-4941-948-1	PANEL ASSY, FRONT	
2	X-4941-537-1	PANEL (BASE) ASSY (H5600)	
	X-4941-539-1	PANEL (BASE) ASSY (H6600)	
3	4-942-636-01	EMBLEM (NO.3.5), SONY	
4	4-812-134-00	RIVET NYLON, 3.5	
5	3-363-099-01	SCREW (CASE +3X8 TP2)	
7	* 1-638-911-13	TRANSFORMER (A) BOARD	
8	* 1-638-912-12	TRANSFORMER (B) BOARD	
9	4-812-134-11	RIVET NYLON, 3.5	
10	4-943-336-41	PANEL, BACK	

Ref. No.	Part No.	Description	Remarks
11	1-541-860-11	MOTOR, DC FAN	
12	4-930-336-01	FOOT (FELT)	
13	* 1-638-906-12	VOLUME BOARD	
14	X-4941-532-1	KNOB (VOLUME) ASSY	
15	* 4-932-841-41	CASE	
16	4-947-205-01	PLATE (A), ORNAMENTAL	
17	4-947-206-01	PLATE (B), ORNAMENTAL	
PT101	⚠1-450-355-11	TRANSFORMER, POWER (UK)	
	⚠1-450-356-11	TRANSFORMER, POWER (AEP, G, IT)	

3-2. OVERALL SECTION 2


61 (Including ●D)
62 (Including ●E – H)
not supplied
●D
# 8
58
not supplied
# 6
69
# 5
not supplied
63
(Including ●I, J)
# 6
●J
71
72
# 8
# 6
# 5
●I
64
(Including ▲A, B)
57
not supplied
56
60
F902
not supplied # 8
67
# 8
# 8
60
F901
▲B
▲A
# 8
56
55
65
not supplied
54
51
53
59
52
53
66
FL501
Including in Ref. No.2
53
# 3
# 8
not supplied

● I : SPEAKER (C) BOARD
● J : SPEAKER (B) BOARD
▲A : JACK (B) BOARD
▲B : JACK (A) BOARD

●D : ELECT CAP (A) BOARD
●E : POWER AMP (B) BOARD
●F : POWER AMP (C) BOARD
●G : POWER AMP (D) BOARD
●H : POWER AMP (E) BOARD

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
51	* 1-638-909-12	CONNECTOR BOARD	
52	* A-4341-606-A	PANEL BOARD, COMPLETE (H6600)	
	* A-4345-734-A	PANEL BOARD, COMPLETE (H5600)	
53	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
54	* 3-682-419-71	HOLDER, PCB	
55	* A-4341-598-A	FLD BOARD, COMPLETE	
56	* 3-309-144-21	HEAT SINK	
57	* A-4341-619-A	POWER SUPPLY BOARD, COMPLETE (AEP, UK)	
	* A-4341-623-A	POWER SUPPLY BOARD, COMPLETE (G, IT)	
58	* 4-932-810-11	CUSHION (FL)	
59	* 3-362-478-21	HOLDER (T), LED	
60	1-533-213-31	HOLDER, FUSE	
61	* 1-638-910-12	ELECT CAP BOARD	

Ref. No.	Part No.	Description	Remarks
62	* A-4341-620-A	POWER AMP BOARD, COMPLETE (AEP, UK)	
62	* A-4341-624-A	POWER AMP BOARD, COMPLETE (G, IT)	
63	* 1-638-907-12	SPEAKER BOARD	
64	* 1-638-904-12	JACK BOARD	
65	* A-4341-586-A	DSP BOARD, COMPLETE	
66	* 4-886-873-00	SPACER	
67	4-860-518-00	CUSHION	
69	4-812-134-11	RIBET NYLON, 3.5	
70	* 3-561-427-21	CUSHION	
72	3-701-947-15	LABEL (T2.5A), FUSE	
F901	⚠1-532-286-00	FUSE (T2.5A)	
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	

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NOTE:

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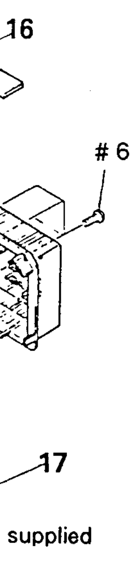
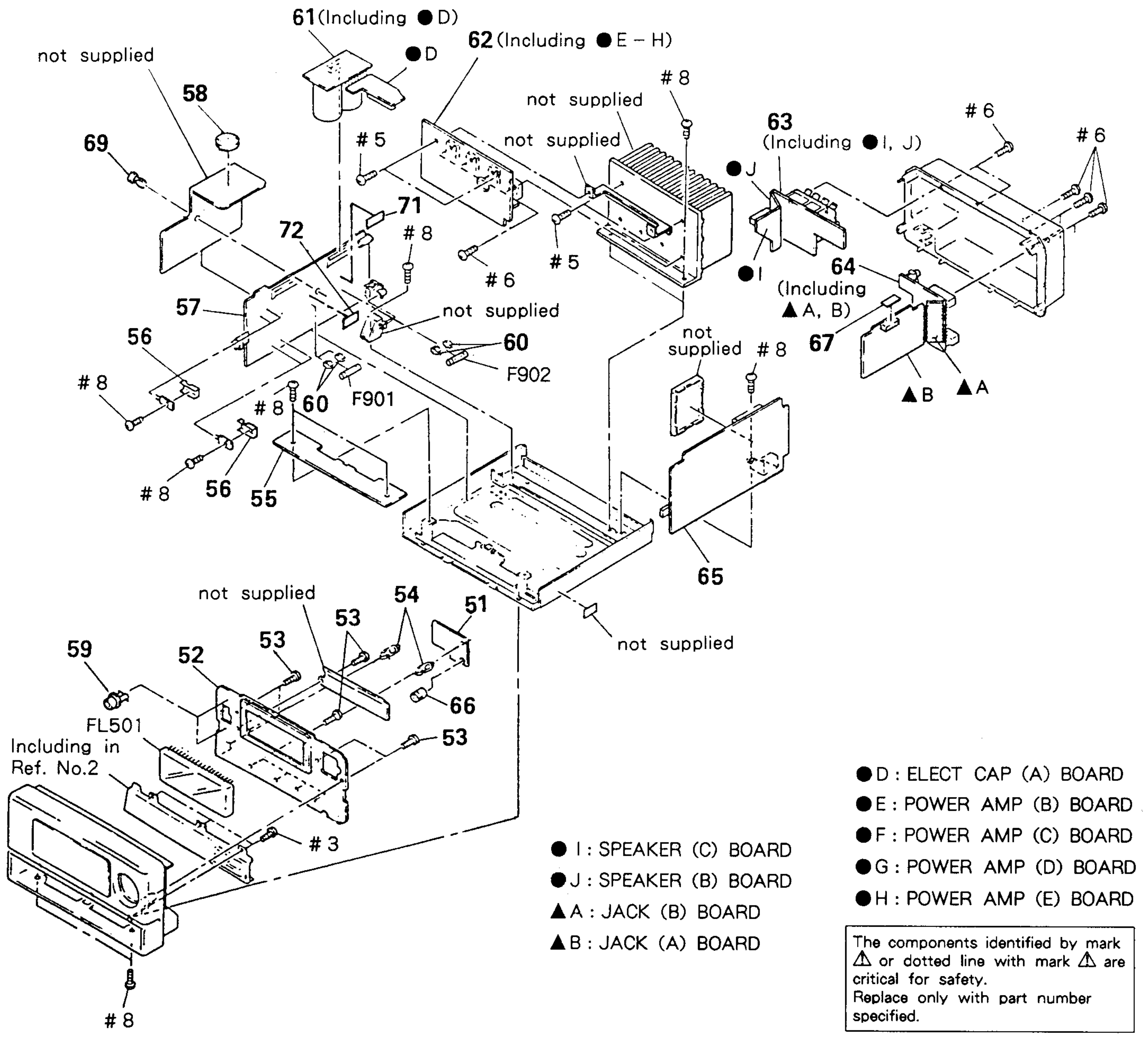


RD
BOARD (B)
BOARD (C)

Remarks

3-2. OVERALL SECTION 2



● D : ELECT CAP (A) BOARD
● E : POWER AMP (B) BOARD
● F : POWER AMP (C) BOARD
● G : POWER AMP (D) BOARD
● H : POWER AMP (E) BOARD

● I : SPEAKER (C) BOARD
● J : SPEAKER (B) BOARD
▲ A : JACK (B) BOARD
▲ B : JACK (A) BOARD

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
51	* 1-638-909-12	CONNECTOR BOARD	
52	* A-4341-606-A	PANEL BOARD, COMPLETE (H6600)	
	* A-4345-734-A	PANEL BOARD, COMPLETE (H5600)	
53	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
54	* 3-682-419-71	HOLDER, PCB	
55	* A-4341-598-A	FLD BOARD, COMPLETE	
56	* 3-309-144-21	HEAT SINK	
57	* A-4341-619-A	POWER SUPPLY BOARD, COMPLETE (AEP, UK)	
	* A-4341-623-A	POWER SUPPLY BOARD, COMPLETE (G, IT)	
58	* 4-932-810-11	CUSHION (FL)	
59	* 3-362-478-21	HOLDER (T), LED	
60	1-533-213-31	HOLDER, FUSE	
61	* 1-638-910-12	ELECT CAP BOARD	
62	* A-4341-620-A	POWER AMP BOARD, COMPLETE (AEP, UK)	
62	* A-4341-624-A	POWER AMP BOARD, COMPLETE (G, IT)	
63	* 1-638-907-12	SPEAKER BOARD	
64	* 1-638-904-12	JACK BOARD	
65	* A-4341-586-A	DSP BOARD, COMPLETE	
66	* 4-886-873-00	SPACER	
67	4-860-518-00	CUSHION	
69	4-812-134-11	RIBET NYLON, 3.5	
70	* 3-561-427-21	CUSHION	
72	3-701-947-15	LABEL (T2.5A), FUSE	
F901	⚠1-532-286-00	FUSE (T2.5A)	
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	

SECTION 4
ELECTRICAL PARTS LIST

PANEL **DSP**

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- – XX, – X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... ,
  uPB... , μPB... , uPC... , μPC... ,
  uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	* A-4341-606-A	PANEL BOARD, COMPLETE (H6600)				
	* A-4345-734-A	PANEL BOARD, COMPLETE (H5600)				
		******************************				
	* A-4341-586-A	DSP BOARD, COMPLETE				
		********************				
	* 3-362-478-21	HOLDER (T), LED				
		< CAPACITOR >				
C102	1-124-589-11	ELECT	47uF	20%	16V	
C103	1-124-589-11	ELECT	47uF	20%	16V	
C104	1-136-153-00	FILM	0.01uF	5%	50V	
C105	1-136-153-00	FILM	0.01uF	5%	50V	
C106	1-124-589-11	ELECT	47uF	20%	16V	
C107	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C109	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C110	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C111	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C125	1-124-915-11	ELECT	10uF	20%	63V	
C126	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C127	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C128	1-124-915-11	ELECT	10uF	20%	63V	
C129	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C130	1-124-915-11	ELECT	10uF	20%	63V	
C131	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C132	1-124-915-11	ELECT	10uF	20%	63V	
C133	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C134	1-124-910-11	ELECT	47uF	20%	50V	
C136	1-124-910-11	ELECT	47uF	20%	50V	
C137	1-124-910-11	ELECT	47uF	20%	50V	
C138	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C139	1-164-346-11	CERAMIC CHIP	1uF		16V	
C140	1-164-346-11	CERAMIC CHIP	1uF		16V	
C141	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C142	1-124-915-11	ELECT	10uF	20%	63V	
C143	1-164-346-11	CERAMIC CHIP	1uF		16V	
C144	1-124-910-11	ELECT	47uF	20%	50V	
C145	1-136-165-00	FILM	0.1uF	5%	50V	
C146	1-136-159-00	FILM	0.033uF	5%	50V	
C147	1-124-915-11	ELECT	10uF	20%	63V	
C148	1-164-346-11	CERAMIC CHIP	1uF		16V	
C149	1-124-910-11	ELECT	47uF	20%	50V	
C150	1-136-165-00	FILM	0.1uF	5%	50V	
C151	1-136-159-00	FILM	0.033uF	5%	50V	
C152	1-124-910-11	ELECT	47uF	20%	50V	
C153	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C154	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C155	1-164-346-11	CERAMIC CHIP	1uF		16V	
C156	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C157	1-164-346-11	CERAMIC CHIP	1uF		16V	
C158	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C159	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C160	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C161	1-164-346-11	CERAMIC CHIP	1uF		16V	
C162	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C163	1-164-346-11	CERAMIC CHIP	1uF		16V	
C164	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C165	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C166	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C169	1-164-346-11	CERAMIC CHIP	1uF		16V	
C170	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C171	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	
C172	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C173	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C174	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C175	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C176	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C177	1-163-222-91	CERAMIC CHIP	5PF	0.25PF	50V	

Ref. No.	Part No.	Description				Remarks
C178	1-163-222-91	CERAMIC CHIP	5PF	0.25PF	50V	
C179	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C180	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C183	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	
C184	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	
C185	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C186	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C188	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C189	1-124-589-11	ELECT	47uF	20%	16V	
C190	1-164-346-11	CERAMIC CHIP	1uF		16V	
C192	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C193	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C195	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C196	1-124-589-11	ELECT	47uF	20%	16V	
C197	1-124-910-11	ELECT	47uF	20%	50V	
C198	1-124-910-11	ELECT	47uF	20%	50V	
C199	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C201	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C202	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C225	1-124-915-11	ELECT	10uF	20%	63V	
C226	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C227	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C228	1-124-915-11	ELECT	10uF	20%	63V	
C229	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C230	1-124-915-11	ELECT	10uF	20%	63V	
C231	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C232	1-124-915-11	ELECT	10uF	20%	63V	
C233	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C234	1-124-910-11	ELECT	47uF	20%	50V	
C238	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C239	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C240	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C241	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C242	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C243	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C244	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C245	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C246	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C247	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C248	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C249	1-164-346-11	CERAMIC CHIP	1uF		16V	
C250	1-164-346-11	CERAMIC CHIP	1uF		16V	
C253	1-164-346-11	CERAMIC CHIP	1uF		16V	
C254	1-164-346-11	CERAMIC CHIP	1uF		16V	
C255	1-164-346-11	CERAMIC CHIP	1uF		16V	
C256	1-164-346-11	CERAMIC CHIP	1uF		16V	
C257	1-164-346-11	CERAMIC CHIP	1uF		16V	
C258	1-164-346-11	CERAMIC CHIP	1uF		16V	
C259	1-164-346-11	CERAMIC CHIP	1uF		16V	
C260	1-164-346-11	CERAMIC CHIP	1uF		16V	
C261	1-164-346-11	CERAMIC CHIP	1uF		16V	
C262	1-164-346-11	CERAMIC CHIP	1uF		16V	
C263	1-164-346-11	CERAMIC CHIP	1uF		16V	
C264	1-164-346-11	CERAMIC CHIP	1uF		16V	
C269	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C270	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C271	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C272	1-124-589-11	ELECT	47uF	20%	16V	
C273	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C274	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C275	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C276	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C279	1-126-163-11	ELECT	4.7uF	20%	50V	
C280	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C282	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C283	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C331	1-163-123-00	CERAMIC CHIP	180PF	5%	50V	
C332	1-163-123-00	CERAMIC CHIP	180PF	5%	50V	
C333	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C334	1-163-123-00	CERAMIC CHIP	180PF	5%	50V	
C335	1-163-123-00	CERAMIC CHIP	180PF	5%	50V	
C336	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C337	1-124-229-00	ELECT	33uF	20%	10V	
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C339	1-124-229-00	ELECT	33uF	20%	10V	
C340	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C341	1-124-229-00	ELECT	33uF	20%	10V	
C342	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C343	1-124-229-00	ELECT	33uF	20%	10V	
C344	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C345	1-124-229-00	ELECT	33uF	20%	10V	
C346	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C347	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C348	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C349	1-126-157-11	ELECT	10uF	20%	16V	
C350	1-163-222-91	CERAMIC CHIP	5PF	0.25PF	50V	
C351	1-124-229-00	ELECT	33uF	20%	10V	
C352	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C353	1-124-229-00	ELECT	33uF	20%	10V	
C355	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	

PANEL DSP

Ref. No.	Part No.	Description				Remarks
C356	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C357	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C358	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C362	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C363	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C391	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C392	1-136-153-00	FILM	0.01uF	5%	50V	
C393	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C501	1-124-667-11	ELECT	10uF	20%	100V	
C502	1-124-667-11	ELECT	10uF	20%	100V	
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C507	1-124-261-00	ELECT	10uF	20%	50V	
C508	1-124-589-11	ELECT	47uF	20%	16V	
C509	1-126-163-11	ELECT	4.7uF	20%	50V	
C510	1-126-301-11	ELECT	1uF	20%	50V	
C511	1-126-163-11	ELECT	4.7uF	20%	50V	
C513	1-163-124-00	CERAMIC CHIP	200PF	5%	50V	
C521	1-124-589-11	ELECT	47uF	20%	16V	
C522	1-124-589-11	ELECT	47uF	20%	16V	
C523	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	
C524	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	
C525	1-126-176-11	ELECT	220uF	20%	10V	
C526	1-124-261-00	ELECT	10uF	20%	50V	
C527	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C528	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C529	1-124-234-00	ELECT	22uF	20%	16V	
C530	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C531	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remarks
CN501	* 1-568-318-11	PLUG, CONNECTOR 6P	
CN502	* 1-568-320-11	PLUG, CONNECTOR 8P	
CN503	1-561-115-00	SOCKET, CONNECTOR 6P	
CN504	* 1-568-320-11	PLUG, CONNECTOR 8P	
CNJ102	1-568-319-11	SOCKET, CONNECTOR 8P	
CNP101	* 1-566-154-11	CONNECTOR, BOARD TO BOARD 20P	
CNP103	1-573-146-11	PLUG, CONNECTOR 8P	
CNP104	* 1-564-509-11	PLUG, CONNECTOR 6P	

< DIODE >

Ref. No.	Part No.	Description		Remarks
D100	8-719-800-76	DIODE	1SS226	
D101	8-719-800-76	DIODE	1SS226	
D102	8-719-990-39	DIODE	DCB010	
D103	8-719-800-76	DIODE	1SS226	
D104	8-719-800-76	DIODE	1SS226	
D105	8-719-800-76	DIODE	1SS226	
D106	8-719-002-81	DIODE	1T363	
D107	8-719-002-81	DIODE	1T363	
D108	8-719-002-81	DIODE	1T363	
D109	8-719-002-81	DIODE	1T363	
D110	8-719-990-39	DIODE	DCB010	
D332	8-719-800-76	DIODE	1SS226	
D333	8-719-210-39	DIODE	EC10QS-04	
D334	8-719-106-08	DIODE	RD6.2M-B2	
D501	8-719-977-03	DIODE	DTZ5.6B	
D502	8-719-990-39	DIODE	DCB010	
D503	8-719-990-39	DIODE	DCB010	
D504	8-719-301-39	LED	SEL2210S-D	
D505	8-719-301-39	LED	SEL2210S-D	
D506	8-719-301-39	LED	SEL2210S-D	
D507	8-719-301-39	LED	SEL2210S-D	
D508	8-719-301-39	LED	SEL2210S-D	
D509	8-719-301-39	LED	SEL2210S-D	
D510	8-719-301-39	LED	SEL2210S-D	
D511	8-719-301-39	LED	SEL2210S-D	
D512	8-719-301-39	LED	SEL2210S-D	
D514	8-719-301-44	LED	SEL2410E-D	
D515	8-719-301-44	LED	SEL2410E-D	
D521	8-719-977-04	DIODE	DTZ5.6C	
D522	8-719-977-04	DIODE	DTZ5.6C	
D523	8-719-990-39	DIODE	DCB010	

< INDICATOR TUBE >

Ref. No.	Part No.	Description	Remarks
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	

< IC >

Ref. No.	Part No.	Description		Remarks
IC101	8-759-635-26	IC	M5283P	
IC102	8-759-504-36	IC	AK5339-KP	
IC103	8-759-805-14	IC	LC7822	
IC106	8-759-511-68	IC	CXD8245M	
IC108	8-752-339-86	IC	CXD2557M	
IC109	8-759-041-72	IC	M37450M8-464FP	
IC110	8-759-973-04	IC	MSM41464-10RS-K	
IC111	8-752-341-99	IC	CXD2701Q	
IC112	8-752-332-80	IC	CXD1160AQ	
IC113	8-759-636-55	IC	M5218AFP	

Ref. No.	Part No.	Description	Remarks
IC114	8-759-636-55	IC M5218AFP	
IC115	8-759-636-55	IC M5218AFP	
IC116	8-759-636-55	IC M5218AFP	
IC117	8-759-636-55	IC M5218AFP	
IC118	8-759-636-55	IC M5218AFP	
IC119	8-759-636-55	IC M5218AFP	
IC120	8-759-636-55	IC M5218AFP	
IC121	8-759-908-17	IC TL082CPS	
IC122	8-759-982-44	IC RC79L05A	
IC123	8-759-512-96	IC CXD2905Q	
IC124	8-759-517-14	IC MB625473PF-G	
IC331	8-752-344-10	IC CXD2561M-1	
IC332	8-752-342-65	IC CXD2560M	
IC333	8-759-234-20	IC TC7S08F	
IC391	8-759-927-29	IC SN74HCU04ANS	
IC392	8-759-250-81	IC TC5081AP	
IC501	8-759-512-46	IC MSC7162	
IC502	8-759-512-45	IC SN755731	
IC503	8-759-512-45	IC SN755731	
IC504	8-759-512-46	IC MSC7162	
IC505	8-759-512-47	IC SN755721	
IC506	8-759-246-46	IC TMP91C640F-2302	
IC507	8-759-605-16	IC M51953BL	
IC508	8-759-039-78	IC MC68HC11E9SC400366FU	
IC509	8-759-512-48	IC XR-1092	

< COIL >

Ref. No.	Part No.	Description	Remarks
L100	1-410-397-21	FERRITE BEAD INDUCTOR (1.1uH)	
L102	1-406-416-11	COIL (OSC) (0.6uH)	
L260	1-412-390-21	INDUCTOR, CHIP 0uH	
L262	1-412-390-21	INDUCTOR, CHIP 0uH	
L331	1-410-381-11	INDUCTOR CHIP 10uH	
L332	1-543-610-11	BEAD, FERRITE	
L333	1-412-390-21	INDUCTOR, CHIP 0uH	
L334	1-412-390-21	INDUCTOR, CHIP 0uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remarks
Q100	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q101	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q102	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q103	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q104	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q105	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q106	8-729-805-65	TRANSISTOR 2SA1344	
Q107	8-729-805-65	TRANSISTOR 2SA1344	
Q108	8-729-805-65	TRANSISTOR 2SA1344	
Q109	8-729-602-21	TRANSISTOR 2SC4154-F	
Q110	8-729-805-65	TRANSISTOR 2SA1344	
Q111	8-729-805-65	TRANSISTOR 2SA1344	
Q112	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q113	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q114	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q115	8-729-805-41	TRANSISTOR 2SC3398	
Q116	8-729-602-21	TRANSISTOR 2SC4154-F	
Q117	8-729-602-21	TRANSISTOR 2SC4154-F	
Q118	8-729-805-41	TRANSISTOR 2SC3398	
Q120	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q121	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q122	8-729-602-21	TRANSISTOR 2SC4154-F	
Q123	8-729-805-65	TRANSISTOR 2SA1344	
Q124	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q125	8-729-602-36	TRANSISTOR 2SA1602-F	
Q126	8-729-805-65	TRANSISTOR 2SA1344	
Q127	8-729-805-41	TRANSISTOR 2SC3398	
Q128	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q129	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q130	8-729-805-65	TRANSISTOR 2SA1344	
Q331	8-729-805-41	TRANSISTOR 2SC3398	
Q332	8-729-805-65	TRANSISTOR 2SA1344	
Q333	8-729-205-97	TRANSISTOR 2SC3668-Y	
Q501	8-729-602-36	TRANSISTOR 2SA1602-F	
Q502	8-729-602-21	TRANSISTOR 2SC4154-F	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-805-65	TRANSISTOR 2SA1344	
Q505	8-729-602-36	TRANSISTOR 2SA1602-F	
Q506	8-729-805-41	TRANSISTOR 2SC3398	
Q507	8-729-602-21	TRANSISTOR 2SC4154-F	
Q508	8-729-602-21	TRANSISTOR 2SC4154-F	
Q509	8-729-602-21	TRANSISTOR 2SC4154-F	
Q510	8-729-602-21	TRANSISTOR 2SC4154-F	
Q511	8-729-602-21	TRANSISTOR 2SC4154-F	
Q512	8-729-602-21	TRANSISTOR 2SC4154-F	
Q513	8-729-602-21	TRANSISTOR 2SC4154-F	
Q514	8-729-602-21	TRANSISTOR 2SC4154-F	
Q515	8-729-602-21	TRANSISTOR 2SC4154-F	
Q516	8-729-602-21	TRANSISTOR 2SC4154-F	
Q517	8-729-602-21	TRANSISTOR 2SC4154-F	

< RESISTOR >

Ref. No.	Part No.	Description	Remarks
R103	1-216-025-00	METAL CHIP 100 5% 1/10W	
R104	1-216-025-00	METAL CHIP 100 5% 1/10W	
R108	1-216-025-00	METAL CHIP 100 5% 1/10W	
R109	1-216-025-00	METAL CHIP 100 5% 1/10W	
R110	1-216-041-00	METAL CHIP 470 5% 1/10W	
R111	1-216-041-00	METAL CHIP 470 5% 1/10W	
R112	1-216-041-00	METAL CHIP 470 5% 1/10W	
R113	1-216-041-00	METAL CHIP 470 5% 1/10W	
R115	1-216-041-00	METAL CHIP 470 5% 1/10W	
R116	1-216-041-00	METAL CHIP 470 5% 1/10W	
R117	1-216-041-00	METAL CHIP 470 5% 1/10W	
R118	1-216-041-00	METAL CHIP 470 5% 1/10W	
R126	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R127	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R128	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R129	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R130	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R131	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R132	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R133	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R134	1-216-043-00	METAL CHIP 560 5% 1/10W	
R135	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R136	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R137	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R138	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R139	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R140	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R141	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R142	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R143	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R146	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R147	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R148	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R149	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R150	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R151	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R152	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R153	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R154	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R155	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R156	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R157	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R158	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R159	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R160	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R161	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R162	1-216-094-00	METAL GLAZE 75K 5% 1/10W	
R163	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R164	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R165	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R166	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R167	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R168	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R169	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R170	1-216-094-00	METAL GLAZE 75K 5% 1/10W	
R171	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R172	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R173	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R174	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R175	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R176	1-216-041-00	METAL CHIP 470 5% 1/10W	
R177	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R178	1-216-025-00	METAL CHIP 100 5% 1/10W	
R179	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R180	1-216-033-00	METAL CHIP 220 5% 1/10W	
R181	1-216-033-00	METAL CHIP 220 5% 1/10W	
R182	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R183	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R184	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R185	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R186	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R187	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R188	1-216-117-00	METAL CHIP 680K 5% 1/10W	
R189	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R190	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R191	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R192	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R193	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R194	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R195	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R196	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R197	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R198	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R199	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R200	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	

Ref. No.	Part No.	Description	Remarks
R201	1-216-061-00	METAL CHIP 3. 3K 5% 1/10W	
R202	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R203	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R204	1-216-117-00	METAL CHIP 680K 5% 1/10W	
R205	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R206	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R207	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R208	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R209	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R210	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R211	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R212	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R213	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R214	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R215	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R216	1-216-033-00	METAL CHIP 220 5% 1/10W	
R217	1-216-033-00	METAL CHIP 220 5% 1/10W	
R218	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R226	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R227	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R228	1-216-067-00	METAL CHIP 5. 6K 5% 1/10W	
R229	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R230	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R231	1-216-053-00	METAL CHIP 1. 5K 5% 1/10W	
R232	1-216-061-00	METAL CHIP 3. 3K 5% 1/10W	
R233	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R234	1-216-043-00	METAL CHIP 560 5% 1/10W	
R235	1-216-057-00	METAL CHIP 2. 2K 5% 1/10W	
R236	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R237	1-216-061-00	METAL CHIP 3. 3K 5% 1/10W	
R238	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R239	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R240	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R241	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R242	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R243	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R250	1-216-037-00	METAL CHIP 330 5% 1/10W	
R251	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R252	1-216-057-00	METAL CHIP 2. 2K 5% 1/10W	
R253	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R254	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R255	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R256	1-216-025-00	METAL CHIP 100 5% 1/10W	
R257	1-216-025-00	METAL CHIP 100 5% 1/10W	
R258	1-216-041-00	METAL CHIP 470 5% 1/10W	
R259	1-216-041-00	METAL CHIP 470 5% 1/10W	
R261	1-216-017-00	METAL CHIP 47 5% 1/10W	
R263	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R264	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R265	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R266	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R267	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R268	1-216-025-00	METAL CHIP 100 5% 1/10W	
R269	1-216-025-00	METAL CHIP 100 5% 1/10W	
R272	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R274	1-216-041-00	METAL CHIP 470 5% 1/10W	
R275	1-216-025-00	METAL CHIP 100 5% 1/10W	
R276	1-216-025-00	METAL CHIP 100 5% 1/10W	
R277	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R279	1-216-076-00	METAL GLAZE 13K 5% 1/10W	
R280	1-216-025-00	METAL CHIP 100 5% 1/10W	
R281	1-216-025-00	METAL CHIP 100 5% 1/10W	
R282	1-216-025-00	METAL CHIP 100 5% 1/10W	
R283	1-216-025-00	METAL CHIP 100 5% 1/10W	
R284	1-216-033-00	METAL CHIP 220 5% 1/10W	
R285	1-216-025-00	METAL CHIP 100 5% 1/10W	
R286	1-216-001-00	METAL CHIP 10 5% 1/10W	
R287	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R288	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R289	1-216-033-00	METAL CHIP 220 5% 1/10W	
R290	1-216-033-00	METAL CHIP 220 5% 1/10W	
R291	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R292	1-216-076-00	METAL GLAZE 13K 5% 1/10W	
R293	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R294	1-216-025-00	METAL CHIP 100 5% 1/10W	
R295	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R296	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R297	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R298	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R299	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R300	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R301	1-216-025-00	METAL CHIP 100 5% 1/10W	
R302	1-216-025-00	METAL CHIP 100 5% 1/10W	
R303	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R306	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R307	1-216-017-00	METAL CHIP 47 5% 1/10W	
R308	1-216-041-00	METAL CHIP 470 5% 1/10W	
R309	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R310	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R311	1-216-073-00	METAL CHIP 10K 5% 1/10W	

Ref. No.	Part No.	Description	Remarks
R312	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R313	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R314	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R315	1-216-033-00	METAL CHIP 220 5% 1/10W	
R316	1-216-033-00	METAL CHIP 220 5% 1/10W	
R317	1-216-025-00	METAL CHIP 100 5% 1/10W	
R318	1-216-295-00	METAL CHIP 0 5% 1/10W	
R319	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R320	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R321	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R322	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R323	1-216-295-00	METAL CHIP 0 5% 1/10W	
R331	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R332	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R333	1-216-061-00	METAL CHIP 3. 3K 5% 1/10W	
R334	1-216-061-00	METAL CHIP 3. 3K 5% 1/10W	
R335	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R336	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R337	1-216-061-00	METAL CHIP 3. 3K 5% 1/10W	
R338	1-216-061-00	METAL CHIP 3. 3K 5% 1/10W	
R339	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R340	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R341	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R342	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R343	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R344	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R345	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R346	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R347	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R348	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R349	1-216-129-00	METAL CHIP 2. 2M 5% 1/10W	
R350	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R351	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R352	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R353	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R354	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R355	1-216-033-00	METAL CHIP 220 5% 1/10W	
R356	1-216-033-00	METAL CHIP 220 5% 1/10W	
R357	1-216-033-00	METAL CHIP 220 5% 1/10W	
R358	1-216-057-00	METAL CHIP 2. 2K 5% 1/10W	
R359	1-216-129-00	METAL CHIP 2. 2M 5% 1/10W	
R360	1-216-001-00	METAL CHIP 10 5% 1/10W	
R361	1-216-033-00	METAL CHIP 220 5% 1/10W	
R364	1-216-033-00	METAL CHIP 220 5% 1/10W	
R391	1-216-044-00	METAL CHIP 620 5% 1/10W	
R392	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R393	1-216-065-00	METAL CHIP 4. 7K 5% 1/10W	
R501	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R502	1-216-071-00	METAL CHIP 8. 2K 5% 1/10W	
R503	1-216-055-00	METAL CHIP 1. 8K 5% 1/10W	
R504	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R505	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R506	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R507	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R508	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R511	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R514	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R516	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R518	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R519	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R520	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R521	1-216-025-00	METAL CHIP 100 5% 1/10W	
R522	1-216-025-00	METAL CHIP 100 5% 1/10W	
R523	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R524	1-216-025-00	METAL CHIP 100 5% 1/10W	
R525	1-216-025-00	METAL CHIP 100 5% 1/10W	
R526	1-216-025-00	METAL CHIP 100 5% 1/10W	
R527	1-216-025-00	METAL CHIP 100 5% 1/10W	
R528	1-216-025-00	METAL CHIP 100 5% 1/10W	
R529	1-216-025-00	METAL CHIP 100 5% 1/10W	
R530	1-216-025-00	METAL CHIP 100 5% 1/10W	
R531	1-216-025-00	METAL CHIP 100 5% 1/10W	
R532	1-216-025-00	METAL CHIP 100 5% 1/10W	
R534	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R535	1-216-025-00	METAL CHIP 100 5% 1/10W	
R536	1-216-025-00	METAL CHIP 100 5% 1/10W	
R537	1-216-025-00	METAL CHIP 100 5% 1/10W	
R538	1-216-025-00	METAL CHIP 100 5% 1/10W	
R539	1-216-025-00	METAL CHIP 100 5% 1/10W	
R540	1-216-053-00	METAL CHIP 1. 5K 5% 1/10W	
R541	1-216-053-00	METAL CHIP 1. 5K 5% 1/10W	
R542	1-216-025-00	METAL CHIP 100 5% 1/10W	
R543	1-216-025-00	METAL CHIP 100 5% 1/10W	
R544	1-216-027-00	METAL CHIP 120 5% 1/10W	
R545	1-216-027-00	METAL CHIP 120 5% 1/10W	
R546	1-216-027-00	METAL CHIP 120 5% 1/10W	
R547	1-216-027-00	METAL CHIP 120 5% 1/10W	
R548	1-216-029-00	METAL CHIP 150 5% 1/10W	
R549	1-216-029-00	METAL CHIP 150 5% 1/10W	
R550	1-216-063-00	METAL CHIP 3. 9K 5% 1/10W	

Ref. No.	Part No.	Description				Remarks
R551	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R552	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R553	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R554	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R555	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R556	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R557	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R558	1-216-025-00	METAL CHIP	100	5%	1/10W	
R559	1-216-025-00	METAL CHIP	100	5%	1/10W	
R560	1-216-027-00	METAL CHIP	120	5%	1/10W	
R561	1-216-027-00	METAL CHIP	120	5%	1/10W	
R562	1-216-021-00	METAL CHIP	68	5%	1/10W	
R563	1-216-021-00	METAL CHIP	68	5%	1/10W	
R564	1-216-021-00	METAL CHIP	68	5%	1/10W	
R565	1-216-027-00	METAL CHIP	120	5%	1/10W	
R566	1-216-027-00	METAL CHIP	120	5%	1/10W	
R567	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R568	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R569	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R570	1-216-025-00	METAL CHIP	100	5%	1/10W	
R572	1-216-025-00	METAL CHIP	100	5%	1/10W	
R573	1-216-025-00	METAL CHIP	100	5%	1/10W	
R574	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R575	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R576	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R577	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R578	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R579	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R580	1-216-025-00	METAL CHIP	100	5%	1/10W	
R581	1-216-025-00	METAL CHIP	100	5%	1/10W	
R582	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R583	1-216-049-11	METAL CHIP	10K	5%	1/10W	(H6600)
R584	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R585	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R586	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R587	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R588	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R589	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R590	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R591	1-216-019-00	METAL CHIP	56	5%	1/10W	
R592	1-216-019-00	METAL CHIP	56	5%	1/10W	
R593	1-216-019-00	METAL CHIP	56	5%	1/10W	
R594	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R621	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R622	1-216-049-00	METAL CHIP	1K	5%	1/10W	

Ref. No.	Part No.	Description				Remarks
R623	1-216-081-00	METAL CHIP	22K	5%	1/10W	(H5600)

< SWITCH >

Ref. No.	Part No.	Description
S501	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)
S502	1-554-303-21	SWITCH, TACTILE (DISPLAY)
S503	1-554-303-21	SWITCH, TACTILE (BALANCE)
S504	1-554-303-21	SWITCH, TACTILE (WAKE UP)
S505	1-554-303-21	SWITCH, TACTILE (DBFB)
S506	1-554-303-21	SWITCH, TACTILE (EFFECT)
S507	1-554-303-21	SWITCH, TACTILE (DYNAMIC SOUND)
S508	1-554-303-21	SWITCH, TACTILE (PRESET)
S509	1-554-303-21	SWITCH, TACTILE (PARAMETRIC EQUALIZER)
S510	1-554-303-21	SWITCH, TACTILE (ON/OFF)
S511	1-554-303-21	SWITCH, TACTILE (PRESENCE SURROUND)
S512	1-554-303-21	SWITCH, TACTILE (MEMORY)
S513	1-554-303-21	SWITCH, TACTILE (▶) (CURSOR CONTROL)
S514	1-554-303-21	SWITCH, TACTILE (▲) (CURSOR CONTROL)
S515	1-554-303-21	SWITCH, TACTILE (▼) (CURSOR CONTROL)
S516	1-554-303-21	SWITCH, TACTILE (◀) (CURSOR CONTROL)
S517	1-554-303-21	SWITCH, TACTILE (VIDEO)
S518	1-554-303-21	SWITCH, TACTILE (AUDIO)

< VIBRATOR >

Ref. No.	Part No.	Description
X100	1-579-069-11	VIBRATOR, CRYSTAL (49.152MHz)
X101	1-577-253-11	VIBRATOR, CERAMIC (16.93MHz)
X102	1-579-125-11	VIBRATOR, CERAMIC (8MHz)
X501	1-579-351-11	VIBRATOR, CERAMIC (15MHz)
X502	1-579-125-11	VIBRATOR, CERAMIC (8MHz)

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Ref. No.	Part No.	Description
	* A-4341-619-A	POWER SUPPLY BOARD, COMPLETE (AEP, UK)
	* A-4341-623-A	POWER SUPPLY BOARD, COMPLETE (G, IT)
		*************************************
	* 1-638-904-12	JACK BOARD
		**********
	* 1-533-213-31	HOLDER, FUSE
	* 3-309-144-21	HEAT SINK
	7-682-547-04	SCREW +BVTT 3X6 (S)

< CAPACITOR >

Ref. No.	Part No.	Description				Remarks
C1	1-124-915-11	ELECT	10uF	20%	63V	
C2	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C3	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C5	1-136-153-00	FILM	0.01uF	5%	50V	
C7	1-162-306-11	CERAMIC	0.01uF	20%	16V	

POWER SUPPLY JACK

Ref. No.	Part No.	Description				Remarks
C651	1-162-282-31	CERAMIC	100PF	10%	50V	
C652	1-162-282-31	CERAMIC	100PF	10%	50V	
C653	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C654	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C655	1-124-903-11	ELECT	1uF	20%	50V	
C656	1-124-119-00	ELECT	330uF	20%	16V	
C661	1-162-282-31	CERAMIC	100PF	10%	50V	
C662	1-162-282-31	CERAMIC	100PF	10%	50V	
C663	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C664	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C665	1-124-903-11	ELECT	1uF	20%	50V	
C903	1-126-943-11	ELECT	2200uF	20%	25V	
C904	1-126-943-11	ELECT	2200uF	20%	25V	
C907	1-136-165-00	FILM	0.1uF	5%	50V	
C908	1-136-165-00	FILM	0.1uF	5%	50V	
C909	1-124-477-11	ELECT	47uF	20%	25V	
C910	1-124-477-11	ELECT	47uF	20%	25V	
C911	1-124-915-11	ELECT	10uF	20%	63V	
C912	1-124-915-11	ELECT	10uF	20%	63V	
C913	1-124-915-11	ELECT	10uF	20%	63V	
C914	1-126-768-11	ELECT	2200uF	20%	16V	
C915	1-124-915-11	ELECT	10uF	20%	63V	
C916	1-124-915-11	ELECT	10uF	20%	63V	
C917	1-124-910-11	ELECT	47uF	20%	50V	
C918	1-124-915-11	ELECT	10uF	20%	63V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remarks
CNJ1	* 1-580-739-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 1)	
CNJ2	* 1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)	
CNP5	* 1-564-509-11	PLUG, CONNECTOR 6P	
CNP6	* 1-564-509-11	PLUG, CONNECTOR 6P	
CNP7	* 1-564-499-11	PIN, CONNECTOR 6P	
CNP902	1-564-506-41	PIN, CONNECTOR 3P (YEL)	
CNP903	* 1-564-321-00	PIN, CONNECTOR 2P	
CNP904	* 1-573-109-11	PIN, CONNECTOR 15P	
CNP904A	1-564-506-31	PIN, CONNECTOR 3P (RED)	
CNP906	* 1-573-087-11	PIN, CONNECTOR 13P	
CNP907	* 1-506-981-11	PIN, CONNECTOR 10P	
CNP908	1-568-317-11	SOCKET, CONNECTOR 6P	
CNP909	* 1-573-148-11	PLUG, CONNECTOR 12P	
CNP910	* 1-564-337-00	PIN, CONNECTOR 3P	
CNP911	* 1-564-505-11	PLUG, CONNECTOR 2P	

< DIODE >

Ref. No.	Part No.	Description		Remarks
D891	8-719-912-20	DIODE	1SS120	
D892	8-719-912-20	DIODE	1SS120	
D901	8-719-302-38	DIODE	RBV-602-01	
D902	8-719-912-20	DIODE	1SS120	
D903	8-719-912-20	DIODE	1SS120	
D904	8-719-200-82	DIODE	11ES2	
D905	8-719-200-82	DIODE	11ES2	
D906	8-719-200-82	DIODE	11ES2	
D907	8-719-200-82	DIODE	11ES2	
D908	8-719-200-82	DIODE	11ES2	
D909	8-719-200-82	DIODE	11ES2	
D910	8-719-912-20	DIODE	1SS120	
D911	8-719-933-36	DIODE	HZS6B1L	
D919	8-719-912-20	DIODE	1SS120	
D920	8-719-912-20	DIODE	1SS120	

< IC >

Ref. No.	Part No.	Description		Remarks
IC1	8-749-922-41	IC	GP1F34R	
IC2	8-749-922-41	IC	GP1F34R	
IC3	8-749-922-39	IC	GP1F34T	
IC651	8-759-634-50	IC	M5218AL	
IC901	8-759-602-66	IC	M5230L-A	
IC902	8-759-231-53	IC	M5F7805	
ICP903	1-532-846-21	LI	NK, IC 5A	
ICP904	1-532-846-21	LI	NK, IC 5A	

< JACK >

Ref. No.	Part No.	Description	Remarks
J2	1-569-662-11	JACK, PIN 1P (SUPER WOOFER)	
J651	1-562-837-21	JACK (HEADPHONES)	
J901	1-526-931-11	INLET, AC (AC IN)	

< COIL >

Ref. No.	Part No.	Description	Remarks
L901	⚠1-424-485-11	FILTER, LINE	

< TRANSISTOR >

Ref. No.	Part No.	Description		Remarks
Q651	8-729-141-30	TRANSISTOR	2SC3623A-LK	
Q652	8-729-900-61	TRANSISTOR	DTA114ES	
Q661	8-729-141-30	TRANSISTOR	2SC3623A-LK	
Q901	8-729-209-15	TRANSISTOR	2SD2012	
Q902	8-729-111-67	TRANSISTOR	2SB1094-L	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER SUPPLY | JACK | POWER AMP | VOLUME | SPEAKER
FLD | CONNECTOR | ELECT CAP | TRANSFORMER (A),(B)

Ref. No.	Part No.	Description				Remarks
Q903	8-729-900-80	TRANSISTOR	DTC114ES			
Q904	8-729-209-15	TRANSISTOR	2SD2012			
Q905	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q906	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q908	8-729-801-84	TRANSISTOR	2SB1013-4			
Q909	8-729-111-29	TRANSISTOR	2SD1616A-K			
Q910	8-729-111-29	TRANSISTOR	2SD1616A-K			
Q911	8-729-620-05	TRANSISTOR	2SC2603-EF			

< RESISTOR >

Ref. No.	Part No.	Description				Remarks
R651	1-249-433-11	CARBON	22K	5%	1/4W	
R652	1-249-439-11	CARBON	68K	5%	1/4W	
R653	1-249-400-11	CARBON	39	5%	1/4W	
R654	1-249-423-11	CARBON	3.3K	5%	1/4W	
R655	1-249-423-11	CARBON	3.3K	5%	1/4W	
R656	1-249-405-11	CARBON	100	5%	1/4W	
R657	1-249-441-11	CARBON	100K	5%	1/4W	
R661	1-249-433-11	CARBON	22K	5%	1/4W	
R662	1-249-439-11	CARBON	68K	5%	1/4W	
R663	1-249-400-11	CARBON	39	5%	1/4W	
R664	1-249-423-11	CARBON	3.3K	5%	1/4W	
R665	1-249-423-11	CARBON	3.3K	5%	1/4W	
R666	1-249-405-11	CARBON	100	5%	1/4W	
R902	1-247-903-00	CARBON	1M	5%	1/4W	
R905	1-249-413-11	CARBON	470	5%	1/4W	
R906	1-249-434-11	CARBON	27K	5%	1/4W	
R907	1-249-425-11	CARBON	4.7K	5%	1/4W	
R908	1-249-431-11	CARBON	15K	5%	1/4W	
R909	1-249-431-11	CARBON	15K	5%	1/4W	
R910	1-249-419-11	CARBON	1.5K	5%	1/4W	
R911	1-249-429-11	CARBON	10K	5%	1/4W	
R912	1-249-429-11	CARBON	10K	5%	1/4W	
R913	1-249-429-11	CARBON	10K	5%	1/4W	
R914	1-249-429-11	CARBON	10K	5%	1/4W	
R919	1-249-429-11	CARBON	10K	5%	1/4W	
R920	1-249-429-11	CARBON	10K	5%	1/4W	
R921	⚠1-216-428-00	METAL OXIDE	180	5%	1W	F
R922	1-249-429-11	CARBON	10K	5%	1/4W	
R923	1-249-425-11	CARBON	4.7K	5%	1/4W	
R924	1-249-429-11	CARBON	10K	5%	1/4W	
R925	1-249-429-11	CARBON	10K	5%	1/4W	
R926	1-249-429-11	CARBON	10K	5%	1/4W	
R928	1-247-742-11	CARBON	180	5%	1/2W	
R930	1-249-423-11	CARBON	3.3K	5%	1/4W	
R931	1-249-441-11	CARBON	100K	5%	1/4W	
R932	1-249-429-11	CARBON	10K	5%	1/4W	

< RELAY >

Ref. No.	Part No.	Description	Remarks
RY801	1-515-790-11	RELAY	
RY802	1-515-790-11	RELAY	
RY901	1-515-626-11	RELAY	

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Ref. No.	Part No.	Description	Remarks
	* A-4341-620-A	POWER AMP BOARD, COMPLETE (AEP,UK)	
	* A-4341-624-A	POWER AMP BOARD, COMPLETE (G, IT)	
		*********************************	
	* 1-638-906-12	VOLUME BOARD	
		************	
	* 1-638-907-12	SPEAKER BOARD	
		*************	
	* 1-638-908-13	FLD BOARD	
		*********	
	* 1-638-909-12	CONNECTOR BOARD	
		***************	
	* 1-638-910-12	ELECT CAP BOARD	
		***************	
	* 1-638-911-12	TRANSFORMER (A) BOARD	
		*********************	
	* 1-638-912-12	TRANSFORMER (B) BOARD	
		*********************	
	* 3-309-144-21	HEAT SINK	
	7-682-547-04	SCREW +BVTT 3X6 (S)	

< CAPACITOR >

Ref. No.	Part No.	Description				Remarks
C401	1-126-948-11	ELECT	100uF	20%	35V	
C402	1-130-955-00	FILM	0.01uF	5%	100V	
C403	1-126-948-11	ELECT	100uF	20%	35V	
C404	1-130-477-00	MYLAR	0.0033uF	5%	50V	
C405	1-126-948-11	ELECT	100uF	20%	35V	
C406	1-124-931-11	ELECT	47uF	47%	100V	
C421	1-136-955-00	FILM	0.01uF	5%	100V	
C601	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C602	1-126-933-11	ELECT	100uF	20%	16V	
C603	1-124-915-11	ELECT	10uF	20%	63V	
C604	1-124-915-11	ELECT	10uF	20%	63V	
C701	1-126-176-11	ELECT	220uF	20%	10V	
C702	1-126-176-11	ELECT	220uF	20%	10V	
C704	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C705	1-161-494-00	CERAMIC	0.022uF		25V	

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Replace only with part number specified.

POWE AMP | VOLUME | SPEAKER | FLD | CONNECTOR

ELECT CAP | TRANSFORMER (A),(B)

Ref. No.	Part No.	Description				Remarks
C706	1-124-927-11	ELECT	4.7uF	20%	100V	
C707	1-126-101-11	ELECT	100uF	20%	16V	
C708	1-124-907-11	ELECT	10uF	20%	50V	
C709	1-164-159-11	CERAMIC	0.1uF		50V	
C710	1-124-910-11	ELECT	47uF	20%	50V	
C711	1-164-159-11	CERAMIC	0.1uF		50V	
C801	1-124-907-11	ELECT	10uF	20%	50V	
C802	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C803	1-162-282-31	CERAMIC	100PF	10%	50V	
C804	1-124-927-11	ELECT	4.7uF	20%	100V	
C806	1-136-165-00	FILM	0.1uF	5%	50V	
C807	1-136-165-00	FILM	0.1uF	5%	50V	
C808	1-136-165-00	FILM	0.1uF	5%	50V	
C809	1-136-165-00	FILM	0.1uF	5%	50V	
C821	1-124-907-11	ELECT	10uF	20%	50V	
C822	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C823	1-162-282-31	CERAMIC	100PF	10%	50V	
C824	1-124-927-11	ELECT	4.7uF	20%	100V	
C828	1-136-165-00	FILM	0.1uF	5%	50V	
C829	1-136-165-00	FILM	0.1uF	5%	50V	
C831	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C851	1-124-907-11	ELECT	10uF	20%	50V	
C852	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C853	1-162-282-31	CERAMIC	100PF	10%	50V	
C854	1-124-927-11	ELECT	4.7uF	20%	100V	
C856	1-136-165-00	FILM	0.1uF	5%	50V	
C857	1-136-165-00	FILM	0.1uF	5%	50V	
C858	1-136-165-00	FILM	0.1uF	5%	50V	
C859	1-136-165-00	FILM	0.1uF	5%	50V	
C871	1-124-907-11	ELECT	10uF	20%	50V	
C872	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C873	1-162-282-31	CERAMIC	100PF	10%	50V	
C874	1-124-927-11	ELECT	4.7uF	20%	100V	
C878	1-136-165-00	FILM	0.1uF	5%	50V	
C879	1-136-165-00	FILM	0.1uF	5%	50V	
C891	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C892	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C893	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C894	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C901	1-128-329-11	ELECT	10000uF	20%	42V	
C902	1-128-329-11	ELECT	10000uF	20%	42V	
C905	1-136-171-00	FILM	0.33uF	5%	50V	
C906	1-136-171-00	FILM	0.33uF	5%	50V	
C921	1-126-948-11	ELECT	100uF	20%	35V	
C923	1-126-949-11	ELECT	220uF	20%	35V	
C924	1-126-949-11	ELECT	220uF	20%	35V	
C925	1-126-948-11	ELECT	100uF	20%	35V	
C926	1-164-159-11	CERAMIC	0.1uF		50V	
C927	1-124-915-11	ELECT	10uF	20%	63V	
C928	1-124-915-11	ELECT	10uF	20%	63V	
C929	1-124-557-11	ELECT	1000uF	20%	25V	
C930	1-124-557-11	ELECT	1000uF	20%	25V	

< CONNECTOR >

Ref. No.	Part No.	Description
CN601	1-560-942-00	PIN, CONNECTOR 6P
CN801	* 1-564-521-11	PLUG, CONNECTOR 6P
CN802	* 1-573-087-11	PIN, CONNECTOR 13P
CN891	1-563-311-11	CONNECTOR, BOARD TO BOARD 10P
CN892	* 1-564-518-11	PLUG, CONNECTOR 3P
CNJ603	1-569-656-11	HOUSING, CONNECTOR 8P
CNJ604	1-573-147-11	HOUSING, CONNECTOR 12P
CNJ902	1-573-095-11	SOCKET, CONNECTOR 15P
CNJ911	* 1-573-094-11	SOCKET, CONNECTOR 13P
CNJ912	* 1-573-094-11	SOCKET, CONNECTOR 13P
CNP7	* 1-564-499-11	PIN, CONNECTOR 6P
CNP602	1-568-319-11	SOCKET, CONNECTOR 8P
CNP901	* 1-564-321-00	PIN, CONNECTOR 2P
CNP912	* 1-564-338-00	PIN, CONNECTOR 4P
CNP913	* 1-564-337-00	PIN, CONNECTOR 3P
CNP914	* 1-564-339-00	PIN, CONNECTOR 5P
CNP915	* 1-564-505-11	PLUG, CONNECTOR 2P

< DIODE >

Ref. No.	Part No.	Description	
D401	8-719-815-85	DIODE	1S1585
D402	8-719-933-67	DIODE	HZS11B2L
D403	8-719-933-47	DIODE	HZS7B2L
D404	8-719-815-85	DIODE	1S1585
D405	8-719-815-85	DIODE	1S1585
D406	8-719-200-82	DIODE	11ES2
D409	8-719-934-22	LED	HZS30-2L
D701	8-719-912-20	DIODE	1SS120
D702	8-719-912-20	DIODE	1SS120
D703	8-719-912-20	DIODE	1SS120
D704	8-719-912-20	DIODE	1SS120
D705	8-719-912-20	DIODE	1SS120
D706	8-719-912-20	DIODE	1SS120
D801	8-719-912-20	DIODE	1SS120
D802	8-719-912-20	DIODE	1SS120

POWE AMP VOLUME SPEAKER FLD CONNECTOR

ELECT CAP TRANSFORMER (A),(B)

Ref. No.	Part No.	Description	Remarks
D821	8-719-912-20	DIODE 1SS120	
D822	8-719-912-20	DIODE 1SS120	
D851	8-719-912-20	DIODE 1SS120	
D852	8-719-912-20	DIODE 1SS120	
D871	8-719-912-20	DIODE 1SS120	
D872	8-719-912-20	DIODE 1SS120	
D912	8-719-200-82	DIODE 11ES2	
D913	8-719-200-82	DIODE 11ES2	
D914	8-719-934-22	DIODE HZS30-2L	
D915	8-719-200-82	DIODE 11ES2	
D916	8-719-200-82	DIODE 11ES2	
D917	8-719-934-22	DIODE HZS30-2L	
D918	8-719-014-88	DIODE UZP-6.8BC	
D921	8-719-200-82	DIODE 11ES2	
D922	8-719-200-82	DIODE 11ES2	
D923	8-719-200-82	DIODE 11ES2	
D924	8-719-200-82	DIODE 11ES2	

< IC >

Ref. No.	Part No.	Description	Remarks
IC601	8-759-820-62	IC LB1639	
IC701	8-759-111-68	IC uPC1237HA	
IC702	8-759-987-16	IC LM393P	
IC703	8-759-512-73	IC LM35DZ-SL	
IC801	8-759-323-30	IC LM3875-2	
IC821	8-759-323-30	IC LM3875-2	
IC851	8-759-323-30	IC LM3875-2	
IC871	8-759-323-30	IC LM3875-2	
ICP901	⚠1-532-845-21	LINK, IC 4A	
ICP902	⚠1-532-845-21	LINK, IC 4A	
ICP905	⚠1-532-842-11	LINK, IC 2A	
ICP906	⚠1-532-842-11	LINK, IC 2A	

< JACK >

Ref. No.	Part No.	Description	Remarks
J891	1-537-336-11	TERMINAL BOARD (SP) (TO SATELLITE/BASS UNIT SPEAKER)	

< COIL >

Ref. No.	Part No.	Description	Remarks
L401	1-410-761-11	INDUCTOR 0.68mH	
L402	1-410-521-11	MICRO INDUCTOR	
L801	* 1-420-872-00	COIL, AIR CORE	
L821	* 1-420-872-00	COIL, AIR CORE	
L851	* 1-420-872-00	COIL, AIR CORE	
L871	* 1-420-872-00	COIL, AIR CORE	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

< TRANSISTOR >

Ref. No.	Part No.	Description	Remarks
Q401	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q402	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q403	8-729-142-01	TRANSISTOR 2SC1941-LK	
Q404	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q601	8-729-801-93	TRANSISTOR 2SD1387-3	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q821	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q871	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q911	8-729-209-15	TRANSISTOR 2SD2012	
Q912	8-729-111-67	TRANSISTOR 2SA473	

< RESISTOR >

Ref. No.	Part No.	Description	Remarks
R401	1-249-437-11	CARBON 47K 5% 1/4W	
R402	1-249-437-11	CARBON 47K 5% 1/4W	
R404	⚠1-213-056-11	FUSIBLE 6.8 5% 1W	F
R405	1-249-441-11	CARBON 100K 5% 1/4W	
R406	1-249-437-11	CARBON 47K 5% 1/4W	
R407	1-249-405-11	CARBON 100 5% 1/4W	
R408	1-247-756-11	CARBON 2.2K 5% 1/2W	
R409	1-249-437-11	CARBON 47K 5% 1/4W	
R411	⚠1-213-056-11	FUSIBLE 6.8 5% 1W	F
R601	⚠1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
R602	1-249-419-11	CARBON 1.5K 5% 1/4W	
R603	1-249-422-11	CARBON 2.7K 5% 1/4W	
R604	1-249-429-11	CARBON 10K 5% 1/4W	
R605	1-249-429-11	CARBON 10K 5% 1/4W	
R606	1-249-416-11	CARBON 820 5% 1/4W	
R701	1-249-433-11	CARBON 22K 5% 1/4W	
R702	1-249-441-11	CARBON 100K 5% 1/4W	
R703	1-249-433-11	CARBON 22K 5% 1/4W	
R704	1-249-433-11	CARBON 22K 5% 1/4W	
R705	1-249-429-11	CARBON 10K 5% 1/4W	
R706	1-249-441-11	CARBON 100K 5% 1/4W	(AEP, UK)
R707	1-249-429-11	CARBON 10K 5% 1/4W	
R708	1-249-424-11	CARBON 3.9K 5% 1/4W	
R709	1-249-427-11	CARBON 6.8K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-417-11	CARBON 1K 5% 1/4W	
R712	1-249-437-11	CARBON 47K 5% 1/4W	(AEP, UK)
R802	1-249-437-11	CARBON 47K 5% 1/4W	
R803	1-249-420-11	CARBON 1.8K 5% 1/4W	
R804	1-249-437-11	CARBON 47K 5% 1/4W	

POWE AMP | **VOLUME** | **SPEAKER** | **FLD** | **CONNECTOR**

ELECT CAP | **TRANSFORMER (A),(B)**

Ref. No.	Part No.	Description	Remarks
R805	⚠1-217-151-00	RES, METAL PLATE 0.22 2W F	
R806	1-249-417-11	CARBON 1K 5% 1/4W	
R807	1-249-431-11	CARBON 15K 5% 1/4W	
R808	1-249-441-11	CARBON 100K 5% 1/4W	
R809	⚠1-212-958-00	FUSIBLE 10 5% 1/2W F	
R810	1-249-439-11	CARBON 68K 5% 1/4W	
R811	1-249-429-11	CARBON 10K 5% 1/4W	
R821	1-249-417-11	CARBON 1K 5% 1/4W	
R822	1-249-437-11	CARBON 47K 5% 1/4W	
R823	1-249-420-11	CARBON 1.8K 5% 1/4W	
R824	1-249-438-11	CARBON 56K 5% 1/4W	
R825	⚠1-217-151-00	RES, METAL PLATE 0.22 2W F	
R826	1-249-417-11	CARBON 1K 5% 1/4W	
R827	1-249-431-11	CARBON 15K 5% 1/4W	
R828	1-249-441-11	CARBON 100K 5% 1/4W	
R829	⚠1-212-958-00	FUSIBLE 10 5% 1/2W F	
R830	1-249-437-11	CARBON 47K 5% 1/4W	
R831	1-249-429-11	CARBON 10K 5% 1/4W	
R851	1-249-417-11	CARBON 1K 5% 1/4W	
R852	1-249-437-11	CARBON 47K 5% 1/4W	
R853	1-249-420-11	CARBON 1.8K 5% 1/4W	
R854	1-249-437-11	CARBON 47K 5% 1/4W	
R855	⚠1-217-151-00	RES, METAL PLATE 0.22 2W F	
R856	1-249-417-11	CARBON 1K 5% 1/4W	
R857	1-249-431-11	CARBON 15K 5% 1/4W	
R858	1-249-441-11	CARBON 100K 5% 1/4W	
R859	⚠1-212-958-00	FUSIBLE 10 5% 1/2W F	
R860	1-249-438-11	CARBON 56K 5% 1/4W	
R861	1-249-429-11	CARBON 10K 5% 1/4W	
R871	1-249-417-11	CARBON 1K 5% 1/4W	
R872	1-249-437-11	CARBON 47K 5% 1/4W	
R873	1-249-420-11	CARBON 1.8K 5% 1/4W	
R874	1-249-438-11	CARBON 56K 5% 1/4W	
R875	⚠1-217-151-00	RES, METAL PLATE 0.22 2W F	
R876	1-249-417-11	CARBON 1K 5% 1/4W	
R877	1-249-431-11	CARBON 15K 5% 1/4W	
R878	1-249-441-11	CARBON 100K 5% 1/4W	
R879	⚠1-212-958-00	FUSIBLE 10 5% 1/2W F	
R880	1-249-436-11	CARBON 39K 5% 1/4W	
R881	1-249-429-11	CARBON 10K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
R916	⚠1-249-429-11	CARBON 1K 5% 1/2W F	
R917	⚠1-247-752-11	CARBON 1K 5% 1/2W F	
R891	1-247-727-11	CARBON 10 5% 1/2W (G, IT)	
R892	1-247-727-11	CARBON 10 5% 1/2W (G, IT)	
R893	1-247-727-11	CARBON 10 5% 1/2W (G, IT)	
R894	1-247-727-11	CARBON 10 5% 1/2W (G, IT)	
R918	1-249-441-11	CARBON 100K 5% 1/4W	

< VARIABLE RESISTOR >

RV601	1-241-418-11	RES, VAR, CARBON 10K (VOLUME)	

< TRANSFORMER >

T401	1-450-460-11	TRANSFORMER, DC-DC CONVERTER	
T402	1-450-461-11	TRANSFORMER, DC-DC CONVERTER	

****

MISCELLANEOUS

****

11	1-541-860-11	MOTOR, DC FAN	
F901	⚠1-532-286-00	FUSE (T2.5A)	
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	
PT101	⚠1-450-355-11	TRANSFORMER, POWER (UK)	
PT101	⚠1-450-356-11	TRANSFORMER, POWER (AEP, G, IT)	

****

ACCESSORIES & PACKING MATERIALS

****

	* 4-945-075-01	CUSHION (RIGHT)	
	* 4-945-076-01	CUSHION (LEFT)	

****

HARDWARE LIST

****

#2	7-685-203-19	SCREW +KTP 2X5 TYPE2 NON-SLIT	
#3	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S	
#6	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#7	7-685-870-09	SCREW +BVTT 3X5 (S)	
#8	7-682-547-04	SCREW +BVTT 3X6 (S)	
#9	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	

9-956-560-11

Sony Corporation
Audio Group

English
91I1659-1
Printed in Japan
©1991.9
Published by Customer Relations and Service Group

SONY -09616

MHC-5600

SONY
SERVICE MANUAL

	MHC-5600	FHE-939CD
Amplifier	TA-H5600	TA-H5600
CD Player	CDP-H6600	CDP-H6600
Tuner	ST-H6600	#
Cassette deck	TC-H5600	TC-H5600
Speaker System	SS-H6600	SS-H6600

SONY-04779

TA-H5600/H6600

SERVICE MANUAL

AEP Model
UK Model

This unit is the Amplifier for the MHC-5600/6600 component system.

Photo is TA-H6600

SPECIFICATIONS

Continuous RMS power output	For satellite speaker: 28 + 28 W (8 chms at 1 kHz, DIN) 33 + 33 W (8 ohms at 1 kHz, 5% THD) For bass speaker: 32 + 32 W (6 ohms at 110 Hz, DIN) 37 + 37 W (6 ohms at 110 Hz, 5% THD)
Music power output	(for AEP and U.K.model) For satellite speaker: 44 + 44 W (8 ohms at 1 kHz, 10% THD) For bass speaker: 48 + 48 W (6 ohm at 110 Hz, 10% THD)
Peak music power output (EXCEPT AEP, UK)	550 W
Inputs	ADAPTOR (pin jacks): sensitivity 260 mV impedance 47 kilohms
Outputs	HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more. ADAPTOR (pin jacks) output level 260 mV impedance 1 kilohms SPEAKER (SATELLITE): accepts speakers of 8 to 16 ohms. SPEAKER (BASS): accepts speakers of 6 to 16 ohms

STEREO AMPLIFIER

SONY®

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Notes on chip component replacement

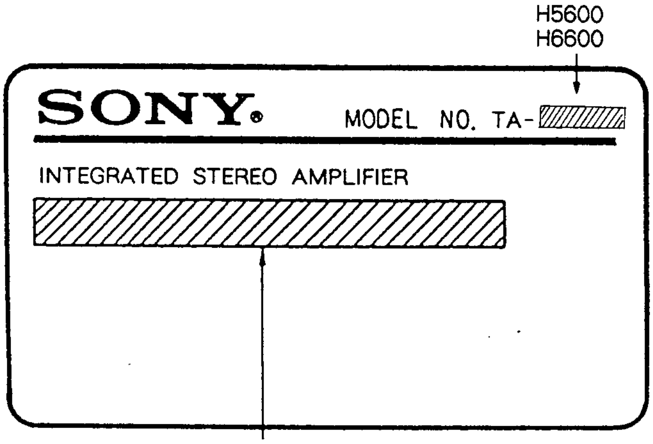
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270℃ during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MODEL IDENTIFICATION

– Specification Label –

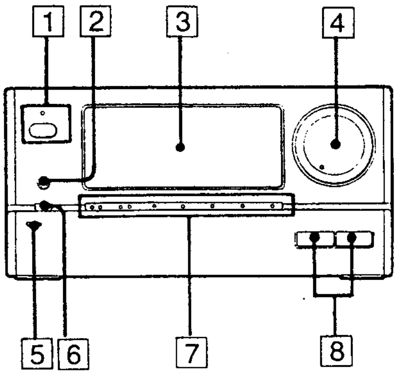


AEP, Germany Model : AC 220V~50/60Hz
Italian Model : AC 220V~50/60Hz
UK Model : AC 240V~50/60Hz

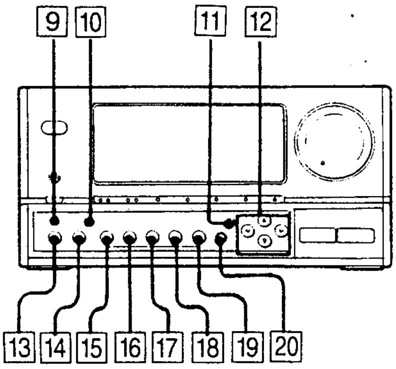
SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATION AND FUNCTION CONTROLS



1. SYSTEM POWER switch and STANDBY indicator
   The indicator remains lit as long as the AC power cord is connected to a wall outlet.
2. HEADPHONES jack (stereo minijack) 00
3. Display window
4. VOLUME control ㉘
5. OPEN tab
6. WAKE UP indicator (134)
7. Function indicators X: ⑳ (138)
8. VIDEO and AUDIO FUNCTION selectors ⑳ (138)



9. WAKE UP button (134)
10. DISPLAY button (78)
11. MEMORY button (56)
12. CURSOR CONTROL button
13. DBFB (Dynamic Bass Feedback) button ㉘
14. BALANCE button ㉘
15. DSP button (72)
16. PRESET buttons (74)
17. DYNAMIC SOUND button (84)
18. PARAMETRIC EQUALIZER button (80)
19. PRESENCE SURROUND button (82)
20. ON/OFF button ㉘ (80) (82) (84)

Audio Adjustment

Volume Adjustment A

Turn VOLUME clockwise to increase the sound level, or counterclockwise to decrease it.
(Or press + or – on the remote commander.)

Balance Adjustment B

Adjust the balance of the speakers to correct the stereo imaging when the speaker position is not symmetrical.

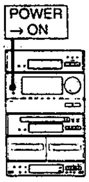
1. **Press BALANCE.**
2. **Adjust with CURSOR CONTROL ◄ or ►.**

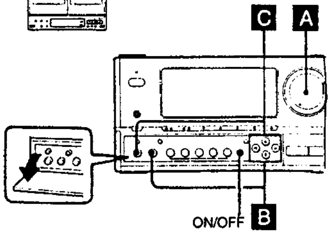
Reinforcing Bass – DBFB* C

1. **Press DBFB.**
2. **Adjust with CURSOR CONTROL ▲ or ▼.**
   The more you press ▲, the more the bass is emphasized.

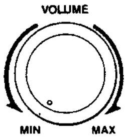
When you do not want to apply the DBFB effect
Press ON/OFF.

*DBFB = Dynamic bass feedback



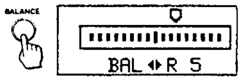


A

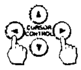


B

1

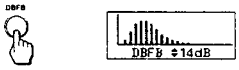


2



C

1



2

CURSOR CONTROL

For personal listening
Connect headphones to HEADPHONES. No sound comes from the speakers.

Using the Digital Sound Effects

This unit incorporates a Digital Signal Processing (DSP) system which consists of a Digital Parametric Equalizer, a Digital Presence Surround Processor, and a Digital Dynamic Sound Controller. Using this DSP system, you can get the optimum sound for the kind of music you want to listen to.

Twelve recommended sound field programs (Digital Sound Menu) are preset at the factory for easy use. You can enjoy the digital sound effects by just choosing from the Digital Sound Menu according to the program source.

You can also create a variety of different sounds and effects by adjusting the Digital Sound Menu settings using three different sound manipulation functions.

Making full use of the DSP system allows you to maximize your music listening enjoyment.
You can also store up to six settings you have created in the memory (Personal File).

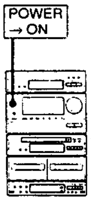
How to get the Digital Sound Effect

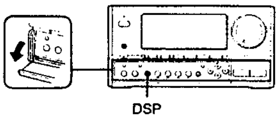
To adjust each of the Digital Sound Effect, you must activate the DSP system first.

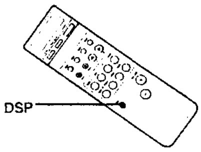
Press DSP.

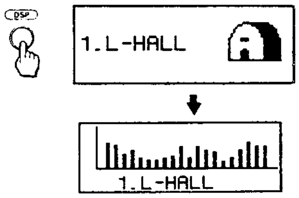
When the DSP is working, one of the 12 Digital Sound Menus (page 74) or one of the six Personal Files (page 86) displays in the display window.

To cancel the DSP effect
Press DSP again.
The Digital Sound Menu or the Personal File disappears and the display shows "EFFECT OFF."









Using the Digital Sound Effects

Enjoying the Digital Sound Menu

When the system is shipped from the factory, 12 specially recommended combinations of settings for the Parametric Equalizer, Presence Surround and Dynamic Sound (Digital Sound Menu) are stored. Since these programs are appropriate for most types of music and listening situations, you can enjoy the digital sound effects by just choosing from the Digital Sound Menu according to the program source.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Press PRESET.**
The display shows a "menu display" (choices) of the Digital Sound Menu.

2 **Select the Digital Sound Menu using CURSOR CONTROL and by referring to the table on page 76.**
The selected Digital Sound Menu displays and the sound effect starts two seconds after releasing the CURSOR CONTROL buttons. Then, the display goes back to its normal state (see page 78).

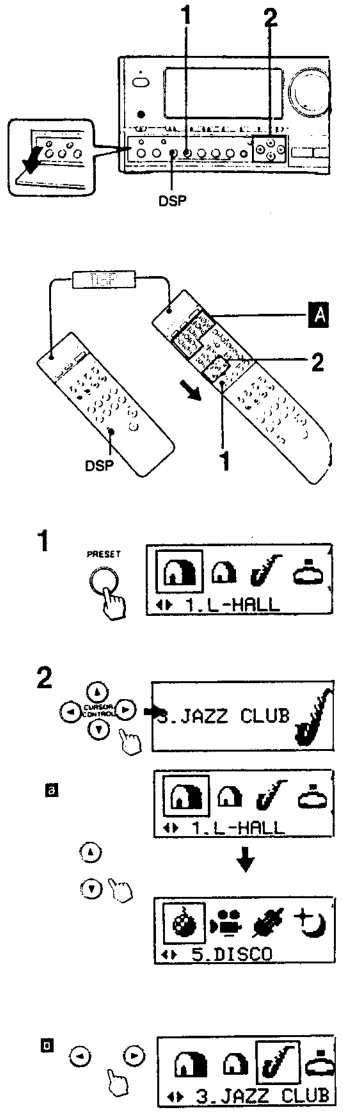
To display the next or previous menu a
Press ▲ or ▼.

To move the cursor b
Press ◄ or ►.

To select the Digital Sound Menu directly

(Possible with the remote commander only)

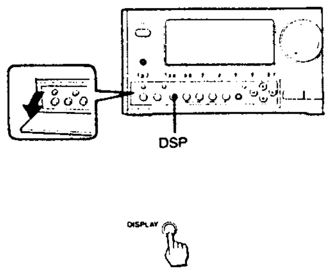
1 Press DSP on the remote commander so that "DSP" appears on the display on the remote commander.
2 Press the numeric button A for the desired Digital Sound Menu



Using the Digital Sound Effects

Display	Applications
1 L-HALL	1
2 S-HALL	2
3 JAZZ CLUB	3
4 STADIUM	4
5 DISCO	5
6 MOVIE	6
7 SYMPHONY	7
8 NIGHT	8
9 BGM	9
10 SIMULATED	10
11 WM	11
12 CAR	12

1 Gives the atmosphere of a large hall which seats more than 2000 people.
2 For chamber music or an instrumental solo.
3 For jazz.
4 For a live concert in an open-air stadium.
5 Gives a sound similar to a disco which has hard floors and walls.
6 For DOLBY surround encoded video programs.
7 For orchestral music.
8 For enjoyment of sound at low listening levels.
9 For background music.
10 Gives width to a monaural program source.
11 For recording a tape to be listened to with stereo headphones.
12 For recording a tape to be listened to in a car.



Using the Digital Sound Effects

Changing the Display

(Not possible with the remote commander)

Each time you press DISPLAY, the display changes in the following order:

a Spectrum analyzer 1
b Spectrum analyzer 2
c Digital Sound Menu Display

Note:
When the DSP system is not on, the display shows "EFFECT OFF" instead of the selected Digital Sound Menu.

To make the display move with the music A

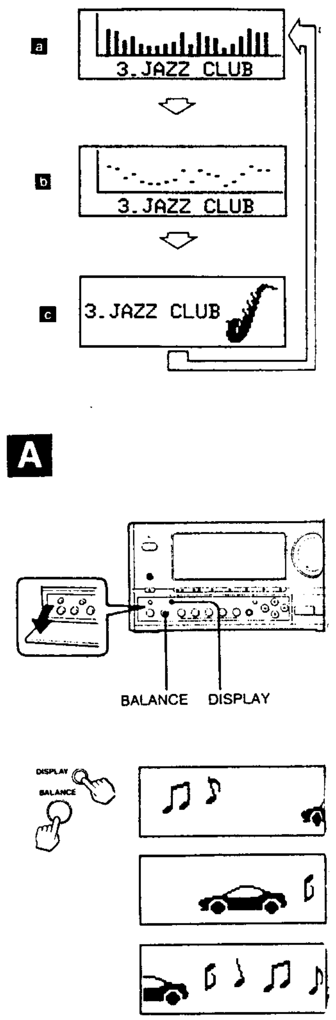
(Not possible with the remote commander)

You can make the picture in the display move to the rhythm of the music as an animation. The picture moves quickly when the music is fast, slowly when the music is slow, and stops when the music stops. You can enjoy this effect along with any sound effect available with this unit.

Press BALANCE and DISPLAY at the same time.

The picture that represents the selected Digital Sound Menu starts moving. Each Digital Sound Menu has a different picture for this effect.
The illustration A shows an example of this effect when the Digital Sound Menu "CAR" is selected. There is also a picture for when the DSP system is not active.

To exit this mode
Press DISPLAY.



Using the Digital Sound Effects

Using the Digital Parametric Equalizer

This function allows you to adjust the sound by raising and lowering the levels of specific frequency ranges.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Select the Digital Sound Menu (See page 74.)**

2 **Select the frequency range you wish to adjust by pressing PARAMETRIC EQUALIZER. (P.EQ on the remote commander)**
Each time you press it, the frequency range in the Equalizer display changes as follows:

$$\text{PEQ 1} \rightarrow \text{PEQ 2} \rightarrow \text{PEQ 3}$$

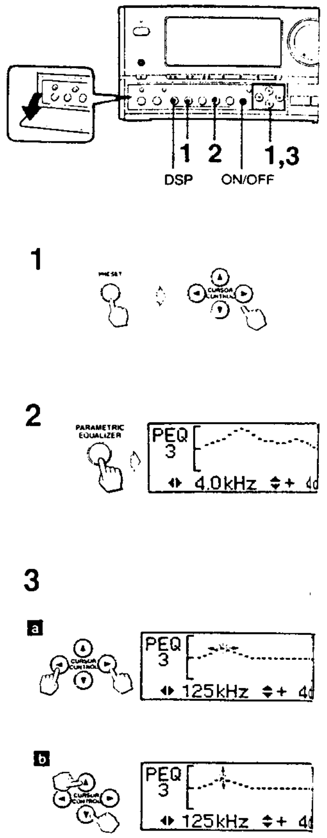
Display	Frequencyr ange
PEQ 1	Low range
PEQ 2	Middle range
PEQ 3	High range

When the unit is shipped from the factory, each of the three frequency positions is defined for a specific frequency range as shown in the above table.
The adjustable frequency range can be freely moved from left to right (low ↔ high) along the frequency scale as explained in the next step. This allows each of the frequencies (PEQ 1 – 3) to be used for any frequency range. For example, PEQ 1 does not have to be used to adjust a low-frequency range, but can be used instead to adjust a mid- or high-frequency range by moving it to the right along the scale.

3 **Adjust the sound using CURSOR CONTROL.**
a ◄ or ►: Shifts the frequency range to be adjusted to the left or to the right.
b ▲ or ▼: Raises or lowers the level of the frequency range centering around the flashing dot

4 **If you wish to adjust the level of another frequency range, repeat steps 2 and 3.**
The "Equalizer display" disappears about 10 seconds after you adjust the sound.

Confirming the effect of the adjustment
Display the "Equalizer display" by pressing PARAMETRIC EQUALIZER and then press ON/OFF.
"±0 dB" displays and the equalizer curve becomes flat.
Each time you press ON/OFF, the sound switches back and forth between the adjusted settings and a flat curve, allowing you to hear and compare the difference.



Using the Digital Sound Effects

Using the Digital Presence Surround Effects

The surround function allows you to adjust the length of the reverberation time and the level of the reverberated sound, putting you in control of a wide range of effects and sounds.
The surround effect adjustments should usually be set to match the size of the envisaged concert hall.
When you want to create the atmosphere of a small hall such as a live house or club, shorten the reverberation time.
When you want to create the atmosphere of a large hall such as a concert hall, lengthen the reverberation time.
If you want to add the feeling of being in a "live" hall where there is a lot of echo, increase the level (strength) of the reverberated sound. If you want to add the feeling of being in a "dead" hall where there is little echo, decrease the level of the reverberated sound.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Select the Digital Sound Menu. (See page 74.)**

2 **Press PRESENCE SURROUND. (SURROUND on the remote commander)**
The "Surround display" appears.

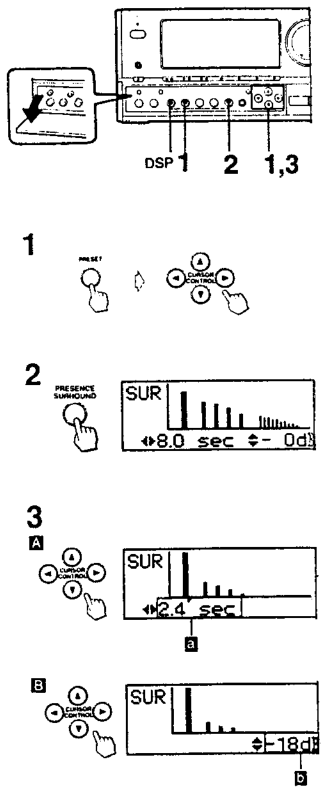
3 **Adjust the sound using CURSOR CONTROL.**

A **To change the reverberation time (a)**
To shorten the reverberation time, press ◀.
To lengthen the reverberation time, press ▶.

B **To change the level of the reverberated sound (b)**
To increase the level, press ▲.
To decrease the level, press ▼.

The "Surround display" disappears about 10 seconds after you adjust the sound.

Confirming the effect of the adjustment
Display the "Surround display" by pressing PRESENCE SURROUND and then press ON/OFF. "---- dB" displays.
Each time you press ON/OFF, the sound switches back and forth between the adjusted settings and no surround effect, allowing you to hear and compare the difference.



Using the Digital Sound Effects

Adjusting the Digital Dynamic Sound Controller

This unit allows you to select either of the two Dynamic Controls, Compressor (CP) or Noise Gate (NG).
The compressor compresses the dynamic range of the output signal to increase the average output level without distortion.
This function is useful for obtaining dynamic sound at a small output level or when recording,a program source with a wide dynamic range, such as a compact disc or a cassette tape.
On the other hand, the Noise Gate limits the dynamic range of the input signal to eliminate undesired noise between tunes, etc.
You can set the Compressor or Noise Gate effect in seven increments: "CP.1" to "CP.4" , "NG.1" to "NG.3".
The higher the number selected, the stronger the effect.
When the dynamic sound controller is set to "NORM," there is no special effect.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

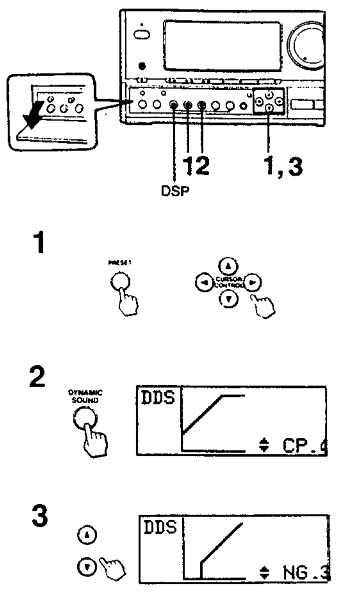
1 **Select the Digital Sound Menu. (See page 74.)**

2 **Press DYNAMIC SOUND. (DDS on the remote commander)**
The "Dynamic Sound display" appears.

3 **Select the Compressor or Noise Gate using CURSOR CONTROL.**

The "Dynamic Sound display" disappears about 10 seconds after adjusting the sound.

Confirming the effect of the adjustment
Display the "Dynamic Sound display" by pressing DYNAMIC SOUND and then press ON/OFF. "NORM" displays.
Each time you press ON/OFF, the sound switches back and forth between the adjusted settings and no Dynamic Sound effect, allowing you to hear and compare the difference.



Using the Digital Sound Effects

Storing Your Individual Sound Effect Settings – Personal File

By storing your individual sound effect settings in the Personal File, you can easily call up the settings at any desired time. You can store up to six combinations of settings.

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Obtain the desired sound effect. (See page 80, 82, 84)**

2 **Press MEMORY.**
"MEMORY menu display" (MEMORY and the letters A to F) appear on the display.

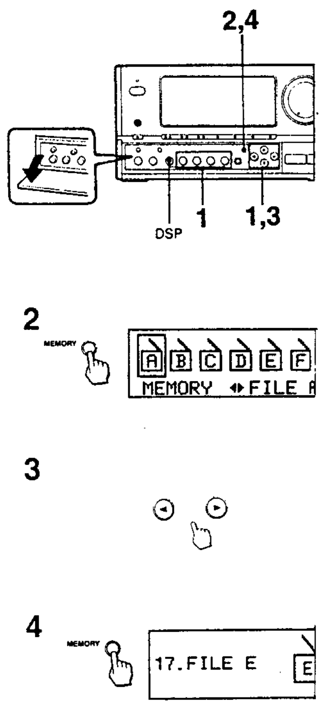
3 **Select a letter (A through F) using CURSOR CONTROL.**

4 **Press MEMORY while the "MEMORY menu display" is displayed.**

The Equalizer Curve, Presence Surround and Dynamic Sound settings are saved under the selected letter. The selected Personal File name appears on the display. The settings previously stored at this memory location are erased and replaced by the new settings.

If you do not press MEMORY in step 4
The "MEMORY menu display" disappears after about 10 seconds. The adjusted sound effect settings is not saved.

If you do not save the sound effect that you obtained
When you press PRESET, the sound effect settings are canceled and the sound goes back to the factory-set effect Store your individual settings before operating other buttons.



Using the Digital Sound Effects

Calling up settings from Personal File

Before you start
If "EFFECT OFF" is displayed, press DSP to activate the DSP system.

1 **Press PRESET.**
The "menu display" of the Digital Sound Menu appears.

2 **Select the Personal File with CURSOR CONTROL.**

To display the Personal File menu
Press ▲ or ▼.

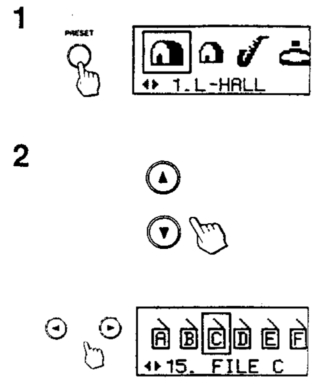
To select the desired Personal File
Press ◀ or ▶.

The selected Personal File displays and the sound effect starts two seconds after releasing the CURSOR CONTROL buttons. Then, the display goes back to its normal state (see page 78.)

To select the Personal File directly (Possible with the remote commander only)

1 Press DSP on the remote commander so that "DSP" appears on the display on the remote commander.
2 Press >12 and the numeric buttons.

Personal File A: >12 and 1
Personal File B: >12 and 2
Personal File C: >12 and 3
Personal File D: >12 and 4
Personal File E: >12 and 5
Personal File F: >12 and 6



Storing the Volume Setting for Timer-Activated Operation Wake Up Volume

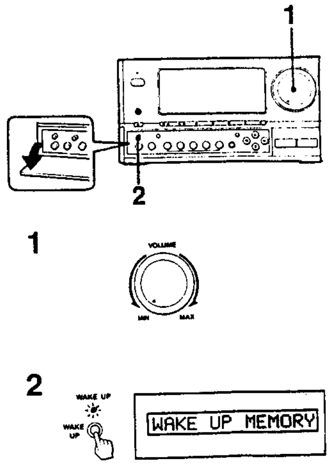
The volume setting is called up automatically when the power is turned on for timer-activated operation (page 128). This is convenient for when you want to wake up to music, etc. You can also use the Sleep Timer function (page 136) together with this function to listen to music in a low volume when you go to sleep, and in a high volume when you wake up.

1 **Adjust the VOLUME.**

2 **Keep WAKE UP depressed until "WAKE UP MEMORY" appears on the display.**
The WAKE UP indicator lights up.

When you do not want to use the Wake Up Volume
Press WAKE UP so that the WAKE UP indicator goes off.

To activate the Wake Up Volume again
Press WAKE UP again.



Sleep Timer Operation

By setting the sleep timer, the system power can be turned off after the preset duration (up to 90 minutes).
This operation is possible only with the remote commander.

1 **Play the desired program source.**

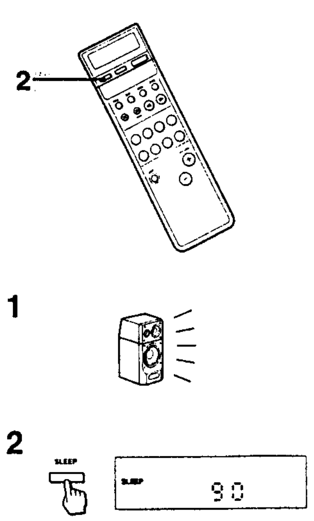
2 **Press SLEEP to select the desired duration in minute.**
As you press SLEEP, the indication changes as follows:
90 → 80 → .... → 10 → ···

To turn off the system before the system is turned off by the sleep timer

Press SYSTEM POWER.

To check the remaining time before the sleep timer turns off the system

Press SLEEP once, and the remaining time appears. The display returns to the previous indication automatically after several seconds.



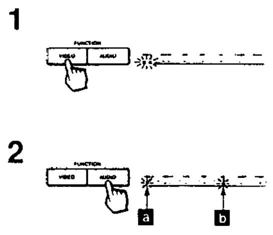
Editing the Sound with a Video Equipment

When you connect a video equipment with this system, you can edit the sound of the audio equipment with the picture of the video equipment.

1 **Press FUNCTION VIDEO (VIDEO 1 or VIDEO 2 on the remote commander) to select the video source.**
The green and red lamps of the program function indicators light up.

2 **Press FUNCTION AUDIO (TUNER, CD, TAPE or TAPE A/B, DAT or PHONO on the remote commander) to select the audio source.**
The green lamp of the video source (a) stays on and the red lamp goes off. The red lamp of the audio source (b) lights up.

The sound of selected the audio source is mixed with the picture of the selected video source.



SECTION 2
DIAGRAMS

2-1. IC PIN DESCRIPTION

- IC101 Dual VCA IC for HiFi Electronic Volume (M5283P)

Pin No.	Name	Mark	Description
1	CH1 side (+) power supply	(+) Vcc	CH1 side power supply terminal
2	CH1 control terminal	Vc1	Controls the signal for ch1 side. Controls the signal by giving 0~5v of the voltage to this terminal. Requires approx. 30nA (standard) as bias current.
3	CH1 output terminal	OUT1	CH1 side output terminal
4 5	(-) power supply terminal	(−) Vcc	Terminals 4, 5, 12, 13 are connected internally.
6	CH1 grounding terminal	GND1	CH1 side grounding terminal (GND)
7	Not connected	NC	Condition is OPEN.
8	CH1 input terminal	IN1	CH1 side input terminal approx. 47K of resistance is inserted for DC bias between GND and this terminal (terminal 8).
9	CH2 input terminal	IN2	CH2 side input terminal approx. 47K of resistance is inserted for DC bias between GND and this terminal (terminal 9).
10	Not connected	NC	Condition is OPEN.
11	Grounding terminal	GND2	CH2 side grounding terminal (GND)
12 13	(-) power supply terminal	(−) Vcc	Terminals 4, 5, 12, 13 are connected internally.
14	CH2 input terminal	OUT2	CH2 side output terminal
15	CH2 control terminal	Vc2	Controls the signal for ch2 side. Controls the signal by giving 0~5v of the voltage to this terminal. Requires approx. 30nA (standard) as bias current.
16	CH2 side (+) power supply	(+) Vcc	CH2 side power supply terminal

- IC111 Digital Signal Operation for Audio (CXD2701Q)

Digital signal operation for 2 channel audio "LSI" which excutes reverberation function and equalizer function in 1 chip.

Pin No.	Pin Name	I/O	Description
1	IMODE	I	Input data format setting terminal Data position changes with "H", "L".
2	IDIR	I	Input data format setting terminal MSB first with "H", LSB first with "L".
3	DATAI	I	Serial data input terminal with 1 sampling, 2 channels. Data format is the complement of 2.
4	BCKI	I	Serial bit clock input terminal for serial input data.
5	LRCKI	I	Serial I/O sampling frequency clock input terminal. L-ch data is transferred with level "H", R-ch data is transferred with level "L".
6	Vss 1	—	GND terminal
7	DATAO	O	Serial data output terminal. Data format is the complement of 2.
8	BCKO	O	Bit clock output terminal. 64 slots.
9	LRCKO	O	Serial data sampling frequency clock output terminal
10	BS1	I	Output data, bit numbers setting terminal BS2 = H, BS1 = H 24bit BS2 = H, BS1 = L 20bit BS2 = L, BS1 = H 18bit BS2 = L, BS1 = L 16bit
11	BS2		
12	ODIR	I	Output data format setting terminal MSB first with "H", LSB first with "L".

Pin No.	Name	I／O	Description
13	V_{ss} 3	—	GND terminal
14	SCK	O	System clock output terminal. fsck = fxt = 512fs
15	XOUT	O	Quartz oscillation circuit output terminal
16	XIN	I	Quartz oscillation circuit input terminal
17	V_{DD} 1	—	+5V Power supply terminal
18	I／O4	I／O	Data input and output I/O4 for outside DRAM
19	I／O3	I／O	Data input and output I/O3 for outside DRAM
20	CAS	O	Outside DRAM column address strobe output terminal.
21	I／O2	I／O	Data input and output I/O2 for outside DRAM
22	I／O1	I／O	Data input and output I/O1 for outside DRAM
23	WE	O	Outside DRAM write enable output terminal. Valid with "L" level
24	A0	O	Outside DRAM address output A0
25	RAS	O	Outside DRAM row address strobe output terminal
26	A1	O	Outside DRAM address output A1
27	A2	O	Outside DRAM address output A2
28	Vss 2	—	GND terminal
29	A3	O	Outside DRAM address A3
30	A4	O	Outside DRAM address A4
31	A5	O	Outside DRAM address A5
32	A6	O	Outside DRAM address A6
33	A7	O	Outside DRAM address A7
34	A8	O	Outside DRAM address A8
35	TEST1	I	Test terminal. Normally fixed to GND.
36	TEST2	I	Test terminal. Normally fixed to GND.
37	TEST3	I	Test terminal. Normally fixed to GND.
38	TEST0	O	Tesr terminal
39	V_{DD} 2	—	+5V power supply terminal
40	PRGD	I	Serial data input terminal which receives the transmission of order, coefficient and control from the micro computer.
41	PRGCK	I	PRGD serial clock input terminal which receives data at positive edge.
42	PRGL	I	Latch input terminal to latch the serial data in IC from the microcomputer. Active "L".
43	INIT	I	Initialize terminal. Valid with "L". Re-synchronize at positive edge.
44	OVF	O	Output the over flow flag of DSP, L-ch MIX, R-ch MIX, L-ch EQ and R-ch EQ.

- IC109 Device Controller (M37450)
- The following items are conducted with the IC109 device controller.
- AU BUS is received and converted for transmission to feature controller (IC508).
- Devices such as DSP (IC111), DIO (IC123) and DPAC (IC112) are controlled in accordance with commands from feature controller (IC508).
- Tuner, deck and CD player are controlled by command transmissions to AU BUS.
- Power ON/OFF of CD players and cassette decks

Pin No.	Name	I/O	Description
1		—	Not used.
2	EV2	I	AU-BUS input
3	EV1	I	AU-BUS input
4	P57	O	AU-BUS output
5	P56	I	AU-BUS input
6	DBDATA	O	LC7822 (DBFB) control (serial data)
7	DBCE	O	LC7822 (DBFB) control (chip enable)
8	DBCLK	O	LC7822 (DBFB) control (clock)
9	DBRES	O	LC7822 (DBFB) control (reset)
10		—	Not used (OPEN).
11	MUTE	O	After VCA Mute. Low : Mute
12, 16	AMUTE	O	Analog Mute. Low : Mute
13	2DB	O	EQ Gain Switch + 2dB *1
14	4DB	O	EQ Gain Switch + 4dB *1
15	8DB	O	EQ Gain Switch + 8dB *1
17		—	Not used.
18	DINERR	I	CDX2905Q (DIO) status input. High : Unlock
19	INT1	I	Not used (GND).
20-24		—	Not used (OPEN).
25	CNV_{ss}	—	Power supply terminal (GND)
26	RESET	I	System reset input
27		—	Not used (OPEN).
28	XIN	I	Clock input (8MHz)
29	XOUT	O	Clock output
30, 31		—	Not used (OPEN).
32	V_{ss}	—	Power supply terminal (GND)
33		—	Not used (OPEN).
34	CDOFF	O	Power control for CDP-H6600, TC-H5600/H6600. Low : POWER ON
35		—	Not used (OPEN).
36	FRES	I	Function request from analog function controller in TC-H5600/H6600.
37	FS48	I	Receives the sampling frequency information from CXD2905Q (DIO). H : fs = 48KHz
38	2701LT	O	Latch to CXD2701Q (DPS + EQ).
39	DEVCLK	O	Data and shift clock to CXD2905Q, CXD1160AX, CXD2701Q.
40	DEVDATA	O	Data and shift clock to CXD2905Q, CXD1160AX, CXD2701Q.
41		—	Not used (OPEN).
42	FS32	I	Receives the sampling frequency information from CXD2905Q (DIO). H : FS = 32KHz
43	DIORDY	I	Handshake with CXD2905Q (DIO). Ready with High.
44		—	Not used (OPEN).
45	DIOIFST	O	CPU I/F for CXD2905Q
46	VCO/XTA	O	VCO/X'tal select. Low for Analog input.
47	AD/DIN	O	AD/DIN select. High for Analot input.
48	EMPH	I	Receives the emphasis information from CXD2905Q (DIO). H : Emphasis ON

Pin No.	Name	I／O	Description
49	CD／DAT	O	CD/DAT DIN select. L : CD, H : DAT
50	DIOIFINI	O	Initializes CPU I/F in CXD2905Q (DIO).
51	INITDA	—	Not used (OPEN).
52	INITDIO	O	CXD2905Q (DIO) reset
53	DOENA	O	Enable and Disable for digital Out
54	NENA	O	Enable output for noise generator of CXD8245M.
55	INIT EQ/D	O	Reset for CXD2701Q and CXD2560M
56	DPAC LT	O	Latch to CXD1160AQ (DPAC)
57	INIT AD	O	Initialization and calibration for CS5339 (A/D). Normal with Low.
58-62	P47-P43	—	Not used (OPEN).
63	NOSIGR	I	Low with no-digital signal
64	NOSIGL	I	Low with no-digital signal
65	AN	—	Not used (OPEN).
66	D-A2	O	D/A output to VCA
67	D-A1	O	D/A output to VCA
68	DAVref	—	Power supply terminal (+5V)
69	ADVref	—	Power supply terminal (+5V)
70	AV_{ss}	—	Power supply terminal (GND)
71	AS_{cc}	—	Power supply terminal (+5V)
72	V_{cc}	—	Power supply terminal (+5V)
73	V_{ss}	—	Power supply terminal (GND)
74, 75		—	Not used (OPEN).
76	TXD	O	Transmission output to MC68HC11 (feature controller). 4800 bps
77	RXD	I	Transmission input to MC68HC11 (feature controller). 4800 bps
78 – 80		—	Not used (OPEN).

※1 Equalizer gain switch

	EQ gain [dB]	−12～0	2	4	6	8	10	12
⑬ pin	+2dB	H	L	H	L	H	L	H
⑭ pin	+4dB	H	H	L	L	H	H	L
⑮ pin	+8dB	H	H	H	H	L	L	L

- IC506 Display Controller (TMP91C640F – 2302)

The FL tube display is controlled with the display command from feature controller (IC506).

Pin No.	Pin Name	I／O	Description
1～11	———	I	Not used. (GND)
12	STB B	I	DATA send LATCH input from IC508
13,14	———	I	Not used. (GND)
15	$\overline{\text{NMI}}$	I	AC power supply interrupt detect input. (Normally set to “H”.) Once “L” is received, the operation is terminated until the Pin No. 16 RESET is cancelled.
16	$\overline{\text{RESET}}$	I	Reset input. Resets when “L”.
17	CLK		Not used. (GND)
18～25	PO0～PO7	I／O	Display command input from IC508
26	Vss	—	Power supply terminal (GND)
27	X1	I	Clock input (15 MHz)
28	X2	O	Clock output (15 MHz)
29,30	———	—	Not used. (Open)
31	STB A	O	DATA receive LATCH output to IC508
32	REQUEST	O	Normally set to “L”. The Pin No. ⑱～㉕ ports are output when “H”.
33～36	———	—	Not used. (Open)

Pin No.	Pin Name	I/O	Description
37~44	——	I	Not used. (GND)
45	——	—	Not used. (Open)
46	DCLR	O	Normally set to "H". Grid is not displayed when "L". DCLR is used for AC outlet ON/OFF only.
47	SCLR	O	Normally set to "L". Segment is not displayed when "H". SCLR is used for AC outlet ON/OFF only.
48	LATCH	O	Data LATCH output to IC501~IC505
49	$\overline{\text{EA}}$	I	Not used. (Pull-up)
50,51	——	I	Not used. (GND)
52	SCLK	O	Segment display clock output to IC502, IC503 and IC505 (segment drivers)
53	SDATA	O	Serial data output to IC502, IC503 and IC505 (segment drivers)
54	——	—	Not used. (GND)
55	DCLK	O	Grid display clock output to IC501 and IC504 (grid drivers)
56	DATA	O	Serial data output (approx. 10 msec sync pulse) to IC501 and IC504 (grid drivers)
57	——	—	Not used. (GND)
58	Vcc	—	Power supply terminal (+5 V)
59	Vref	—	Power supply terminal (+5 V)
60	A GND		Power supply terminal (GND)
61~64	——	—	Not used. (GND)

- IC508 Feature Controller (MC68H011E9-FU)

General controls such as FL display (IC506), IC109 control, spectrum analyzer input, and ON/OFF of mute, relay and LED, are conducted with the AU BUS data and key input from device controller (IC109).

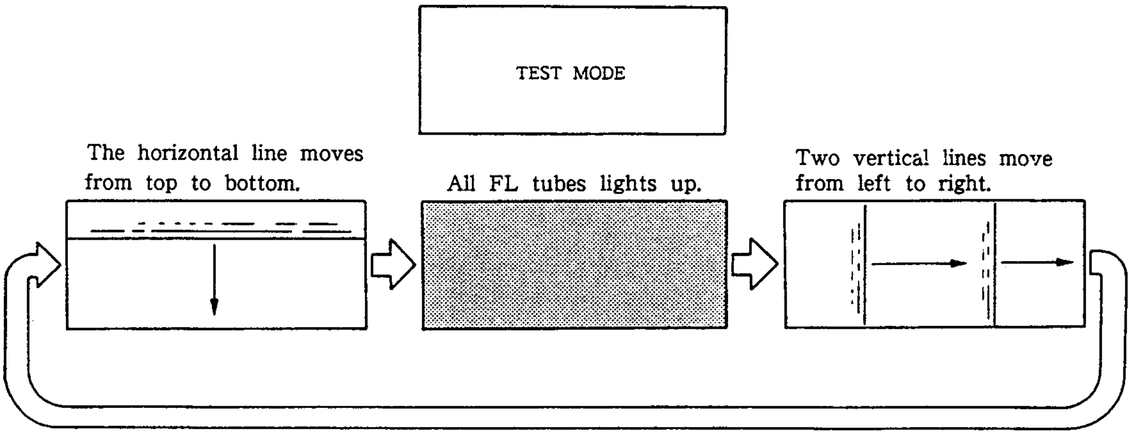
Pin No.	Pin Name	I/O	Description
1	PA0	I	Specification select input (H5600 : L) (H6600 : H)
2~4	NC	—	Not used. (GND)
5	——	O	Not used. (Open)
6~12	LED A~G	O	LED output. Lights up when "H". Conducts dynamic light up at Pin No. (59) (LED SW).
13~16	Spectrum analyzerA~D	I	Spectrum analyzer data input (Analog)
17	VOL DATA	I	Volume (RV601) position detect input (Analog)
18	PE 6	I	Specification select input
19	KEY A	I	} Key input (Analog)
20	KEY B	I	
21	VRL	—	A/D converter (internal) power supply (GND)
22	VRH	—	A/D converter (internal) power supply (+5.6 V)
23, 24	Vss	—	Power supply terminal (GND)
25	MODE B	I	Mode select input (Pull-up fixed)
26	NC	—	Not used. (GND)
27	MODE A	I	Mode select input (GND fixed)
28	STR A	I	DATA receive LATCH input from IC506
29	E	O	Not used. (Open)
30	STR B	O	Data send LATCH input to IC506
31	EXTAL	I	Clock input (8 MHz)
32	NC	—	Not used. (Open)
33	XTAL	O	Clock output
34	PCO	I/O	Display command output to IC506
35	NC	—	Not used. (Open)
36~42	PC1~PC7	I/O	Display command output to IC506
43	$\overline{\text{RESET}}$	I	Reset input. Resets when "L".
44	NC	—	Not used. (GND)
45	$\overline{\text{IRQ}}$	I	Not used. (+5.6 V)

Pin No.	Pin Name	I／O	Description
46	$\overline{\text{XIRQ}}$	I	AC power supply interrupt detect input. (Normally set to "H".)
47	RX	I	Serial data input from IC109
48	NC	—	Not Used. (Open)
49	Vss	—	Power supply terminal (GND)
50	TX	O	Serial data output to IC109
51	POWER	O	Power relay (RY901) ON/OFF output. Active when "H".
52	SPEAKER	O	Speaker relay (RY801, 802) ON/OFF output. Active when "H".
53	MUTE	O	Muting output. Mutes when "L".
54	HP	I	Headphones switch input. "L" when headphones are connected.
55	V_{DD}	—	Power supply terminal (+5.6 V)
56	VOL UP	O	UP signal output to volume motor (RV601)
57	VOL DOWN	O	DOWN signal output to volume motor (RV601)
58	——	—	Not used (Open)
59	SPASW A	O	LED dynamic display/spectrum analyzer select output (3.5 msec square wave)
60, 61	NC	—	Not used. (GND)
62	SPASW B	O	Spectrum analyzer select output (2 msec square wave)
63	REQUEST	I	Normally set to "L". The Pin No. ㉞, and ㊱~㊷ ports are input when "H".
64	——	I	Not used. (GND)

- Test Mode

A test mode is provided to conduct FL tube (FL501) lighting test without disassembling the unit.

Press and release the POWER button while pressing the DISP button during the power ON condition. Release the DISP button to enter the Test Mode.
The following three types of patterns will be displayed each time the DISP button is pressed during this condition.


TEST MODE
The horizontal line moves from top to bottom.
All FL tubes lights up.
Two vertical lines move from left to right.

Other amplifier operations are identical to those during normal conditions (i.e. non-test mode condition). To exit the Test Mode, switch the power ON again.

- IC331 Pulse D/A Converter (CXD2561M)

The converter is a small, high-performance 1 bit pulse D/A converter that provides 4 asymmetrical PWM wave outputs in each ch of L/R.

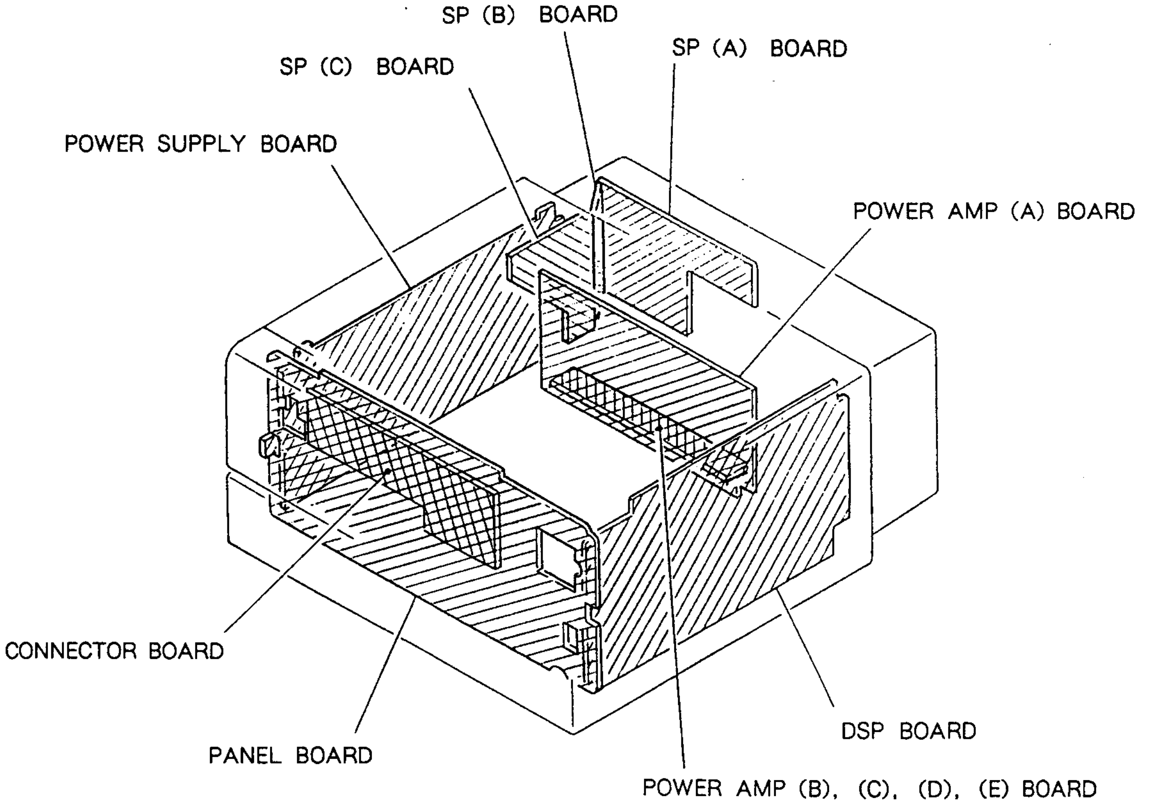
Pin No.	Pin Name	I/O	Description
1	DV$_{DD}$	—	Digital power supply
2	TEST	I	Test terminal. Normally fixed at "L".
3	INIT	I	Again synchronized at the buildup edge of the signal.
4	LRCKI	I	LRCK input
5	DRI	I	Rch data input
6	DLI	I	Lch data input
7	BCKI	I	BCK input
8	DVss	—	Digital GND
9	512Fs	O	512Fs output
10	XVss	—	Clock GND
11	XIN	I	X'tal oscillator input terminal (512Fs)
12	XOUT	O	X'tal oscillator output terminal
13	XV$_{DD}$	—	Clock power supply
14	VSUB	—	Substrate. Connected to GND.
15	AV$_{DD}$R	—	Analog power supply
16	R1 (+)	O	Rch PLM output 1 (normal phase)
17	AVssR	—	Analog GND
18	R1 (−)	O	Rch PLM output 1 (reverse phase)
19	R2 (+)	O	Rch PLM output 2 (normal phase)
20	R2 (−)	O	Rch PLM output 2 (reverse phase)
21	AV$_{DD}$	—	Analog power supply
22	AVss	—	Analog GND
23	L2 (−)	O	Lch PLM output 2 (reverse phase)
24	L2 (+)	O	Lch PLM output 2 (normal phase)
25	L1 (−)	O	Lch PLM output 1 (reverse phase)
26	AVssL	—	Analog GND
27	L1 (+)	O	Lch PLM output 1 (normal phase)
28	AV$_{DD}$L	—	Analog power supply

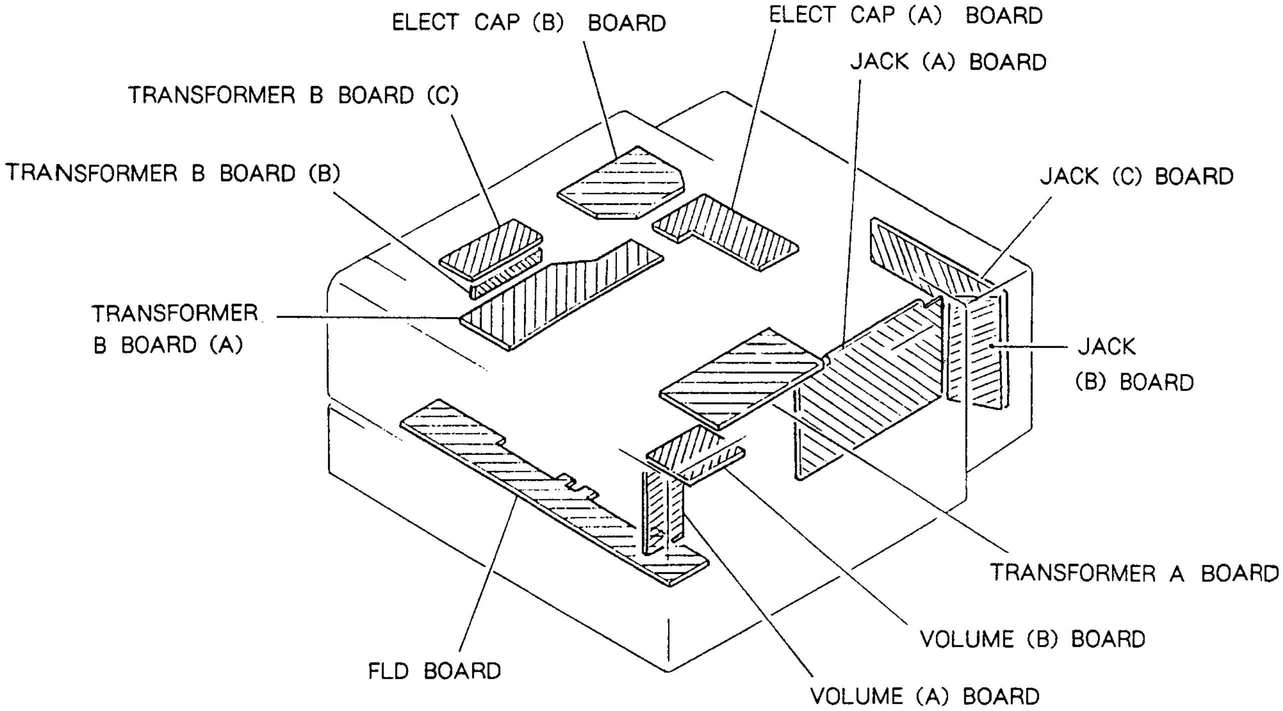
- IC332 Digital Filter (CXD2560M)

The filter is a digital audio 8x oversampling digital filter with built-in L/R 2ch filter, noise shaping attenuator, softmuting deemphasis, etc.

Pin No.	Pin Name	I/O	Description
1	Vss	—	Power terminal (GND)
2	SYSM	I	System mute input. Effective upon "H"
3	ATT	I	ATT data input in CTL "L." EMP input upon CTL "H."
4	SHIFT	I	Shift clock input upon CTL "L." FS32 input upon CTL "H."
5	LATCH	I	Latch clock input upon CTL "L." FS48 input upon CTL "H."
6	CTL	I	Pull-down in the IC. Direct input mode upon "H." Serial transfer mode upon "L."
7	INIT	I	Synchronized again at the buildup edge of the signal.
8	BCKI	I	BCK input
9	DATAI	I	Data input
10	LACKI	I	LRCK input
11	TEST	I	Test terminal. Fixed at "L" during normal use.
12	Vss	—	Power terminal (GND)
13	128Fs	O	128Fs clock output
14	INVI	I	Inverter input
15	INVO	O	Inverter output
16	INVO2	O	Inverter output
17	MCLK	I	Master clock input (f=512Fs)
18	V$_{DD}$	—	Power terminal (+5 V)
19	BCKO	O	BCK output
20	DL	O	Lch data output.
21	DR	O	Rch data output
22	LRCKO	O	LRCK output
23	FLGL	O	Lch φ mute flag output
24	FLGR	O	Rch φ mute flag output

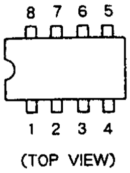
2-2. CIRCUIT BOARDS LOCATION


SP (B) BOARD
SP (C) BOARD
SP (A) BOARD
POWER SUPPLY BOARD
POWER AMP (A) BOARD
CONNECTOR BOARD
PANEL BOARD
DSP BOARD
POWER AMP (B), (C), (D), (E) BOARD

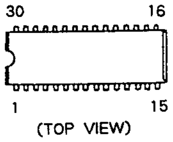

ELECT CAP (B) BOARD
ELECT CAP (A) BOARD
JACK (A) BOARD
TRANSFORMER B BOARD (C)
TRANSFORMER B BOARD (B)
JACK (C) BOARD
TRANSFORMER B BOARD (A)
JACK (B) BOARD
TRANSFORMER A BOARD
VOLUME (B) BOARD
FLD BOARD
VOLUME (A) BOARD

2-3. SEMICONDUCTOR LEAD LAYOUTS

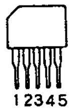
LM393P


8 7 6 5
1 2 3 4
(TOP VIEW)

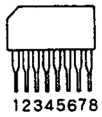
LC7822


30
16
1
15
(TOP VIEW)

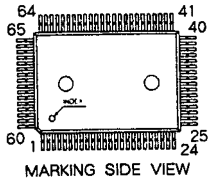
M51953BL



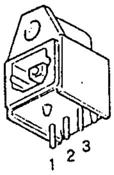
μPC1237HA
M5218AL
M5230L-A



CXD1160AQ

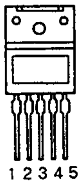

64
41
65
40
60
1
25
24
MARKING SIDE VIEW

GP1F34R
GP1F34T



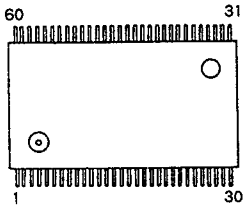
	34R	34T
1	VCC	IN
2	GND	VCC
3	OUT	GND

LM3875-2

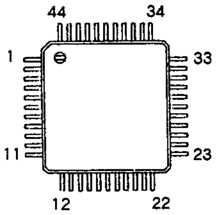


1 +IN
2 −IN
3 −VEE
4 OUT
5 VCC

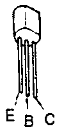
MSC7162



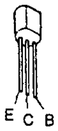
SN75521
SN75531


44
34
1
33
11
23
12
22

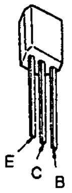
2SC1841-PAFAEA



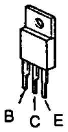
2SB1013-4
2SD1387-3
2SD1616A-K



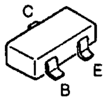
DTC114ES
2SA1134
2SC2603-EF



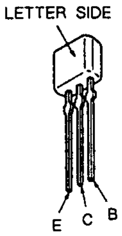
2SB1094-L



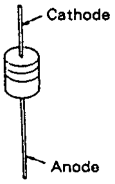
2SC3398
2SC3624A-15



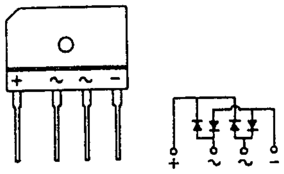
2SA1175-HFE


LETTER SIDE
E C B

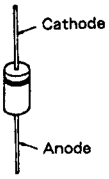
HZS6B1L
HZS7B2L
HZS11B3L
1SS120
11ES2


Cathode
Anode

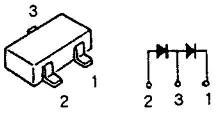
RBV-602-01



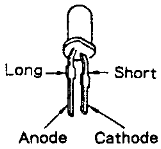
HZS30-2L
HZ12B2L
1SS120
1S1585


Cathode
Anode

1SS226

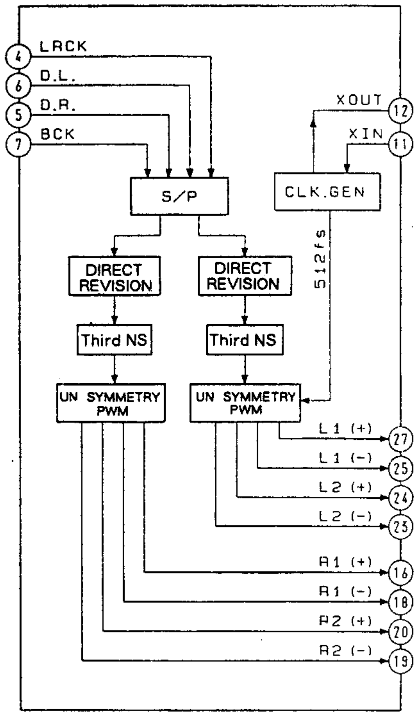


SEL2410E-D

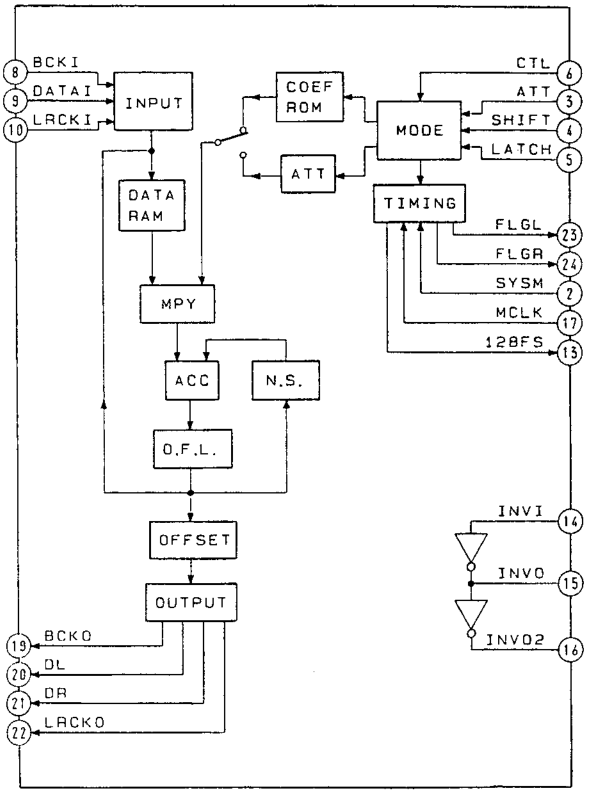

Long
Short
Anode
Cathode

2-4. IC BLOCK DIAGRAMS

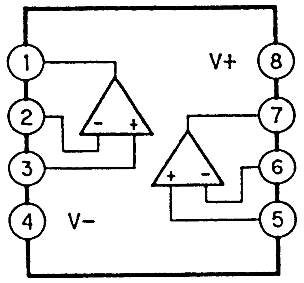
IC331 CXD2561


LRCK
4
D.L.
6
D.R.
5
BCK
7
XOUT
12
XIN
11
S/P
CLK.GEN
512fs
DIRECT REVISION
DIRECT REVISION
Third NS
Third NS
UN SYMMETRY PWM
UN SYMMETRY PWM
L1 (+)
27
L1 (-)
25
L2 (+)
24
L2 (-)
23
R1 (+)
16
R1 (-)
18
R2 (+)
20
R2 (-)
19

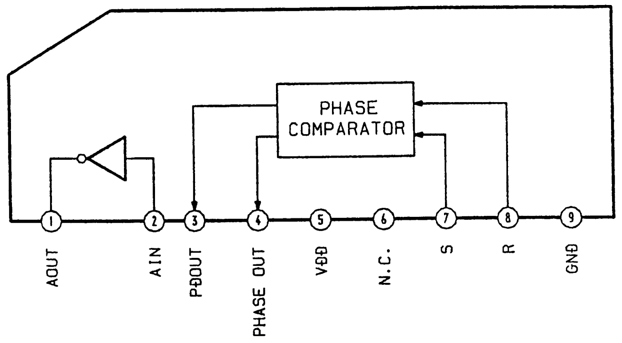
IC332 CXD2560M


BCKI
8
DATAI
9
LRCKI
10
INPUT
COEF ROM
ATT
MODE
CTL
6
ATT
3
SHIFT
4
LATCH
5
DATA RAM
TIMING
FLGL
23
FLGR
24
SYSM
2
MCLK
17
128FS
13
MPY
ACC
N.S.
O.F.L.
OFFSET
OUTPUT
INVI
14
INVO
15
INVO2
16
BCKO
19
DL
20
DR
21
LRCKO
22

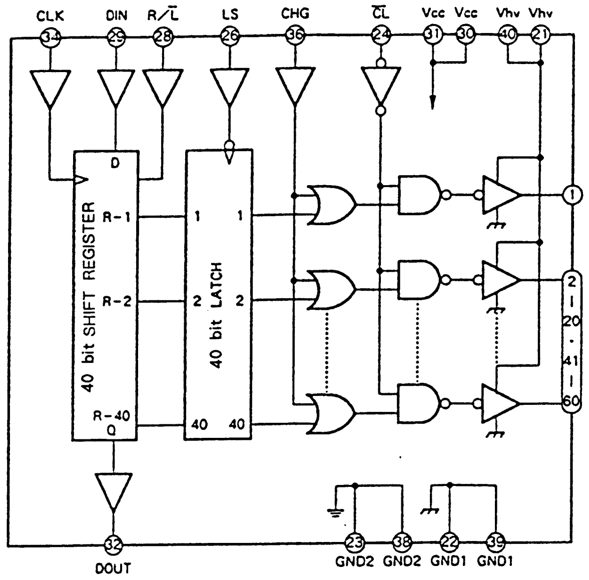
IC3, IC121 TL082M
IC113-120 M5218AFP


1
2
3
4
V+
8
7
6
5
V−

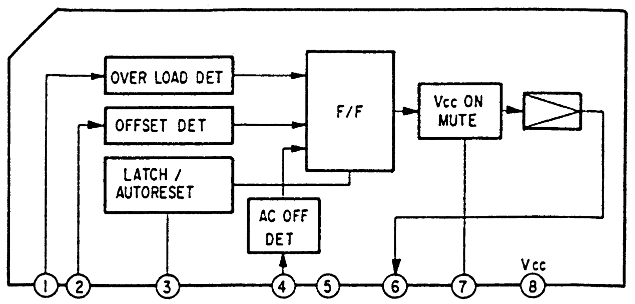
IC392 TC5081AP


PHASE COMPARATOR
AOUT
AIN
PDOUT
PHASE OUT
VDD
N.C.
S
R
GND

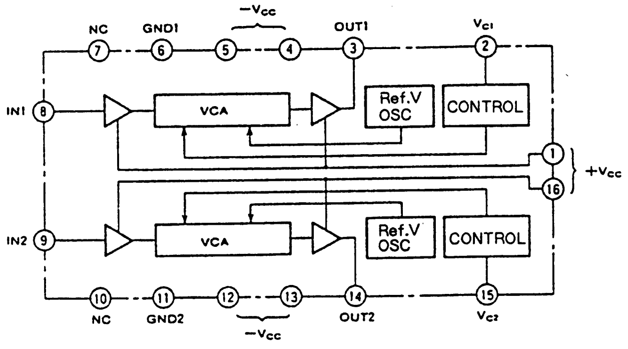
IC501, 504 MSC7162


CLK
DIN
R/L̄
LS
CHG
C̄L̄
Vcc
Vcc
Vhv
Vhv
40 bit SHIFT REGISTER
R-1
R-2
R-40
D
Q
40 bit LATCH
HV01
HV02
HV040
DOUT
GND2
GND2
GND1
GND1

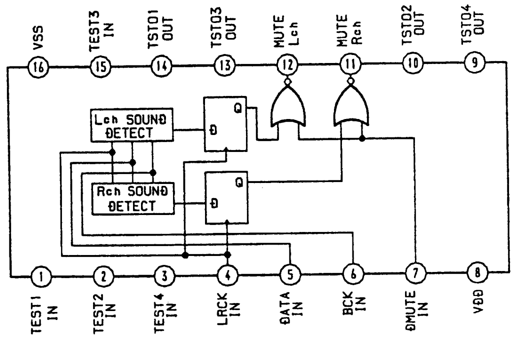
IC701 µ PC1237HA


OVER LOAD DET
OFFSET DET
LATCH / AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc

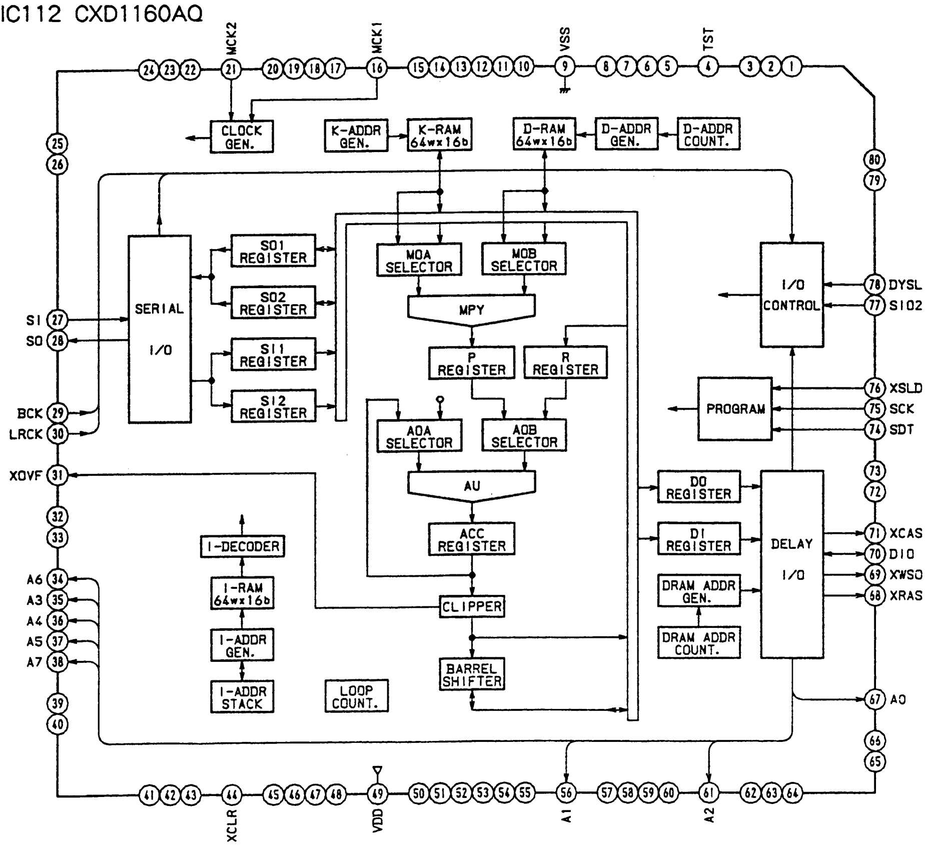
IC101 M5283P


NC
GND1
−Vcc
OUT1
Vc1
IN1
IN2
VCA
Ref.V OSC
CONTROL
+Vcc
NC
GND2
OUT2
Vc2

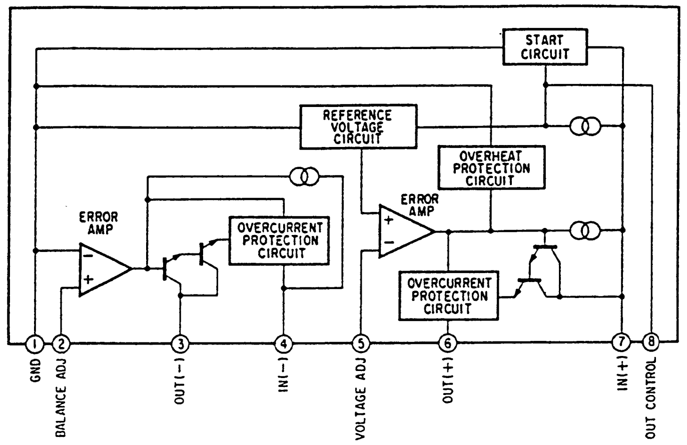
IC108 CXD2557M


VSS
TEST3 IN
TST01 OUT
TST03 OUT
MUTE Lch
MUTE Rch
TST02 OUT
TST04 OUT
Lch SOUND DETECT
Rch SOUND DETECT
TEST1 IN
TEST2 IN
TEST4 IN
LRCK IN
DATA IN
BCK IN
DMUTE IN
VDD

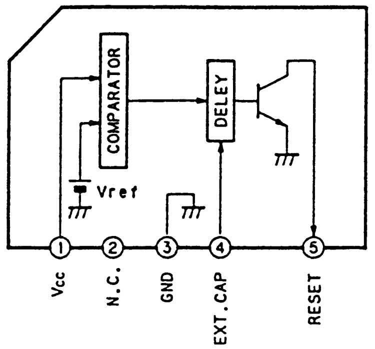
IC112 CXD1160AQ


MCK2
MCK1
VSS
TST
CLOCK GEN.
K-ADDR GEN.
K-RAM 64wx16b
D-RAM 64wx16b
D-ADDR GEN.
D-ADDR COUNT.
SERIAL I/O
S01 REGISTER
S02 REGISTER
S11 REGISTER
S12 REGISTER
MOA SELECTOR
MOB SELECTOR
MPY
P REGISTER
R REGISTER
AOA SELECTOR
AOB SELECTOR
AU
ACC REGISTER
CLIPPER
BARREL SHIFTER
I/O CONTROL
PROGRAM
DO REGISTER
D1 REGISTER
DRAM ADDR GEN.
DRAM ADDR COUNT.
DELAY I/O
I-DECODER
I-RAM 64wx16b
I-ADDR GEN.
I-ADDR STACK
LOOP COUNT.
SI
SO
BCK
LRCK
XOVF
A6
A3
A4
A5
A7
DYSL
SIO2
XSLD
SCK
SDT
XCAS
DIO
XWSO
XRAS
AO
XCLR
VDD
A1
A2

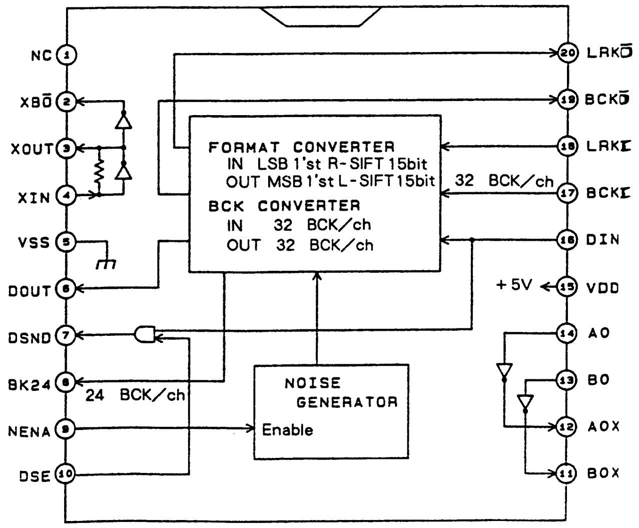
IC901 M5230L


START CIRCUIT
REFERENCE VOLTAGE CIRCUIT
OVERHEAT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
GND
BALANCE ADJ
OUT(−)
IN(−)
VOLTAGE ADJ
OUT(+)
IN(+)
OUT CONTROL

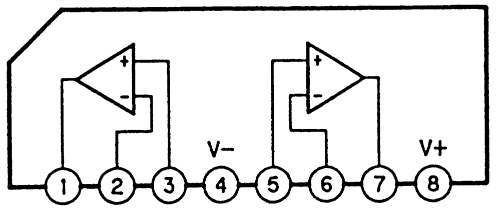
IC507 M51953BL

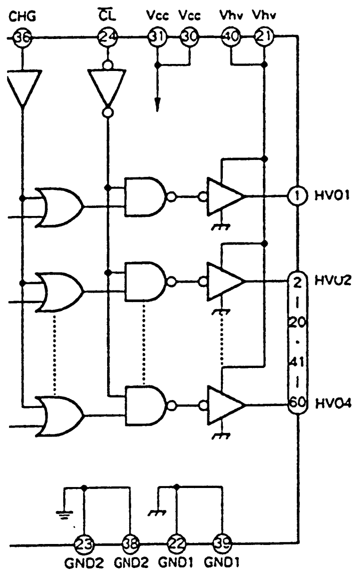

COMPARATOR
DELEY
Vref
Vcc
N.C.
GND
EXT.CAP
RESET

IC106 CXD8245M

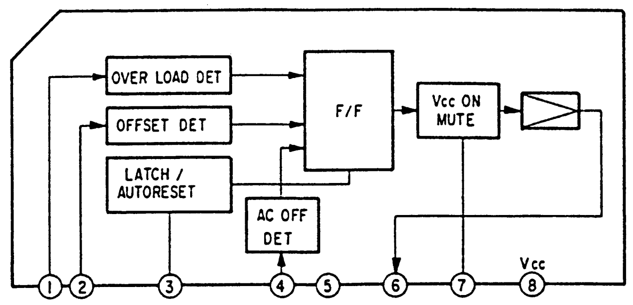

NC
XBŌ
XOUT
XIN
VSS
DOUT
DSND
BK24
NENA
DSE
LRKŌ
BCKŌ
LRKI
BCKI
DIN
+5V
VDD
AO
BO
AOX
BOX
FORMAT CONVERTER
IN LSB 1'st R-SIFT 15bit
OUT MSB 1'st L-SIFT 15bit
BCK CONVERTER
IN 32 BCK/ch
OUT 32 BCK/ch
32 BCK/ch
24 BCK/ch
NOISE GENERATOR
Enable

IC651 M5218AL

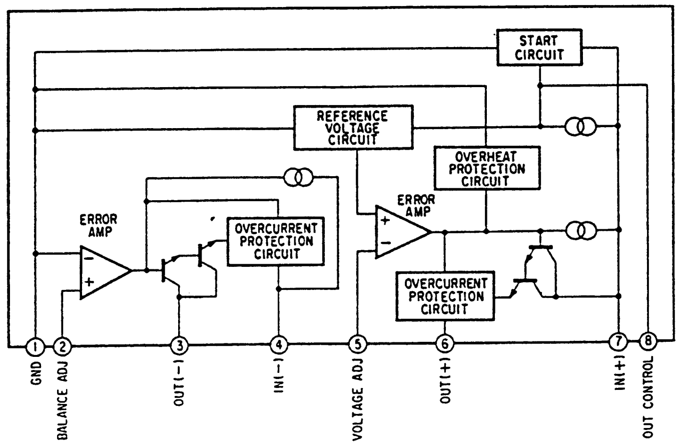

1
2
3
4
5
6
7
8
V−
V+

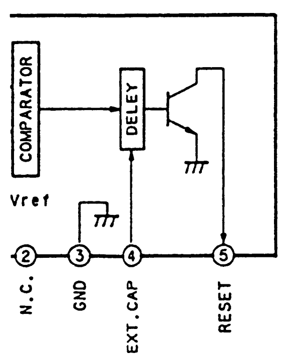

CHG
CL
Vcc Vcc
Vhv Vhv
36
24
31
30
40
21
HVO1
HVU2
HVO40
GND2 GND2 GND1 GND1
23
38
22
39

IC701 µ PC1237HA

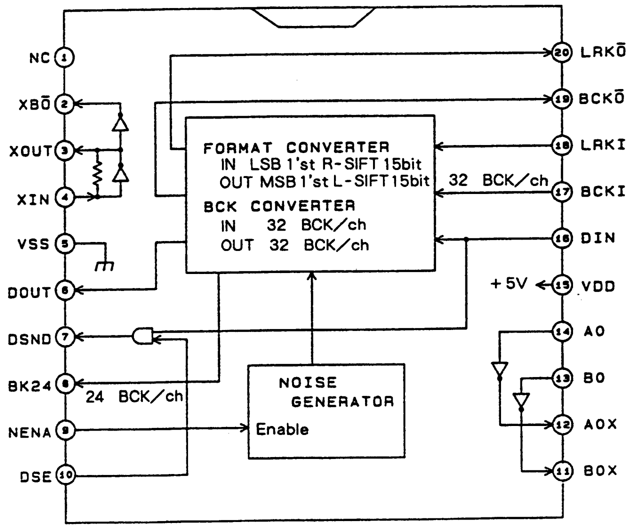

OVER LOAD DET
OFFSET DET
LATCH / AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc
1
2
3
4
5
6
7
8

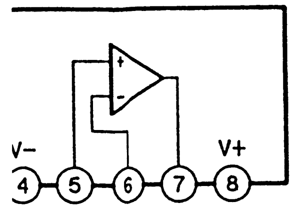
IC901 M5230L


START CIRCUIT
REFERENCE VOLTAGE CIRCUIT
OVERHEAT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
ERROR AMP
OVERCURRENT PROTECTION CIRCUIT
GND
BALANCE ADJ
OUT(-)
IN(-)
VOLTAGE ADJ
OUT(+)
IN(+)
OUT CONTROL

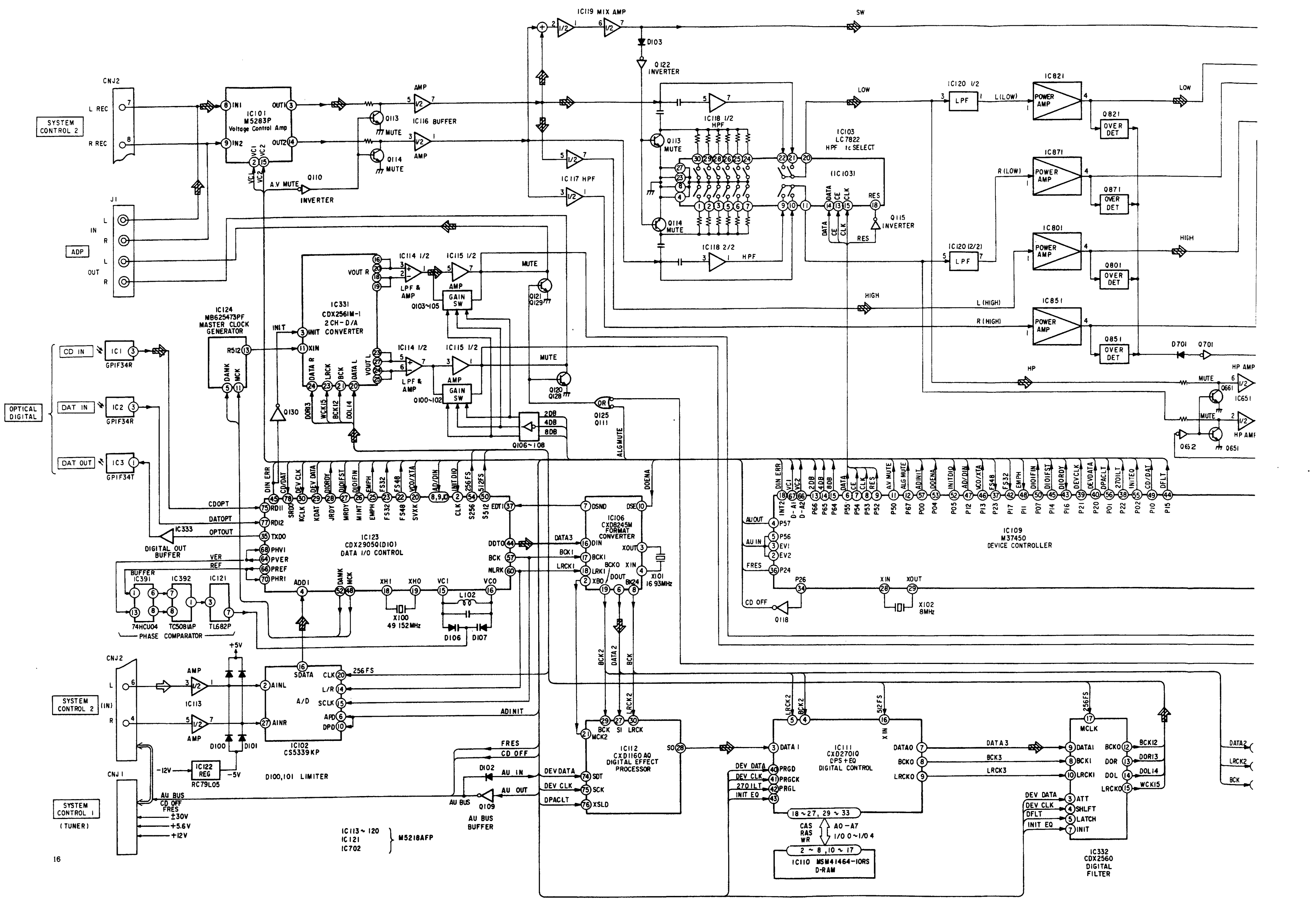

COMPARATOR
DELEY
Vref
N.C.
GND
EXT.CAP
RESET
2
3
4
5

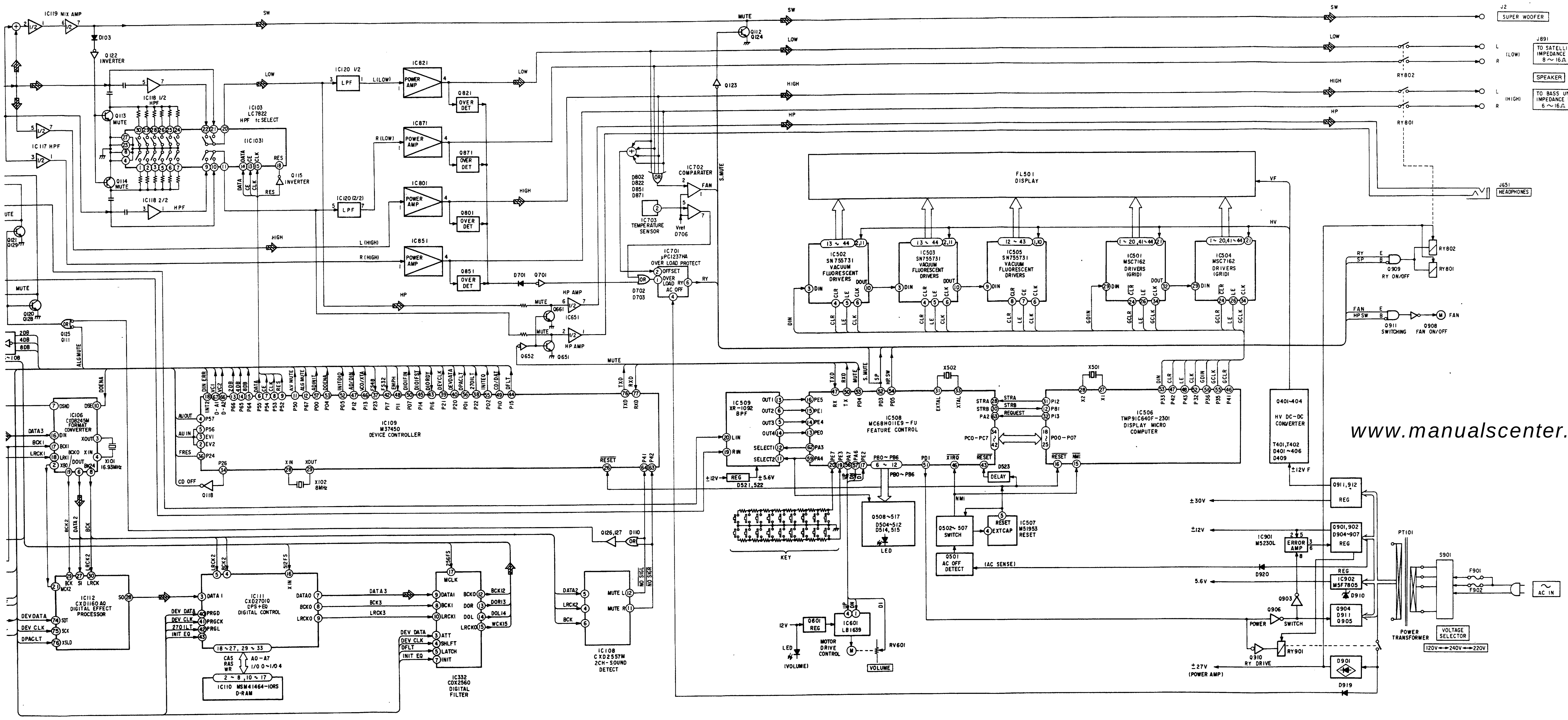
IC106 CXD8245M


NC
XBO
XOUT
XIN
VSS
DOUT
DSND
BK24
NENA
DSE
LRKO
BCKO
LRKI
BCKI
DIN
VDD
AO
BO
AOX
BOX
+5V
FORMAT CONVERTER
IN LSB 1'st R-SIFT 15bit
OUT MSB 1'st L-SIFT 15bit
BCK CONVERTER
IN 32 BCK/ch
OUT 32 BCK/ch
32 BCK/ch
24 BCK/ch
NOISE GENERATOR
Enable



2-5. BLOCK DIAGRAM


IC119 MIX AMP
SW
D103
Q122 INVERTER
CNJ2
L REC
R REC
SYSTEM CONTROL 2
IC101 M5283P Voltage Control Amp
IC116 BUFFER
AMP
Q113 MUTE
Q114 MUTE
Q110 A.V MUTE INVERTER
IC117 HPF
IC118 1/2 HPF
IC118 2/2 HPF
IC103 LC7822 HPF fc SELECT
Q115 INVERTER
RES
LOW
HIGH
IC120 1/2 LPF
IC120 (2/2) LPF
L(LOW)
R(LOW)
L(HIGH)
R(HIGH)
IC821 POWER AMP
IC871 POWER AMP
IC801 POWER AMP
IC851 POWER AMP
Q821 OVER DET
Q871 OVER DET
Q801 OVER DET
Q851 OVER DET
D701
HP
HP AMP
IC651
Q651
Q652
J1
IN
OUT
ADP
IC114 1/2
IC115 1/2
IC331 CDX2561M-1 2CH-D/A CONVERTER
LPF & AMP
GAIN SW
MUTE
Q121 Q129
Q120 Q128
Q125 Q111
Q106~108
Q100~102
Q103~105
IC124 MB625473PF MASTER CLOCK GENERATOR
OPTICAL DIGITAL
CD IN
DAT IN
DAT OUT
IC1 GP1F34R
IC2 GP1F34R
IC3 GP1F34T
IC333 DIGITAL OUT BUFFER
IC123 CDX29050(DIO) DATA I/O CONTROL
IC391 IC392 IC121
74HCU04 TC5081AP TL682P
PHASE COMPARATOR
X100 49.152MHz
D106 D107
L102
IC106 CXD8245M FORMAT CONVERTER
X101 16.93MHz
IC109 M37450 DEVICE CONTROLLER
X102 8MHz
Q118
CD OFF
FRES
AU IN
AU OUT
IC113 AMP
IC102 CS5339KP A/D
D100,101 LIMITER
IC122 REG RC79L05
-12V
-5V
+5V
CNJ1
SYSTEM CONTROL 1 (TUNER)
AU BUS
+5.6V
+12V
Q109 AU BUS BUFFER
IC113~120 IC121 IC702 M5218AFP
IC112 CXD1160AQ DIGITAL EFFECT PROCESSOR
IC111 CXD2701Q DPS+EQ DIGITAL CONTROL
IC110 MSM41464-10RS D-RAM
IC332 CDX2560 DIGITAL FILTER
DEV DATA
DEV CLK
DPACLT
270ILT
INIT EQ
DATA3
BCK3
LRCK3
DFLT
256FS
ALGMUTE
ADINIT
16


IC119 MIX AMP
D103
Q122 INVERTER
IC118 1/2 HPF
Q113 MUTE
Q114 MUTE
IC118 2/2 HPF
IC117 HPF
IC103 LC7822 HPF fc SELECT
Q115 INVERTER
IC120 1/2 LPF
IC120 (2/2) LPF
IC821 POWER AMP
Q821 OVER DET
IC871 POWER AMP
Q871 OVER DET
IC801 POWER AMP
Q801 OVER DET
IC851 POWER AMP
Q851 OVER DET
L (LOW)
R (LOW)
L (HIGH)
R (HIGH)
SW
LOW
HIGH
HP
MUTE
Q112 Q124
Q123
D802 D822 D851 D871
IC702 COMPARATER
FAN
Vref D706
IC703 TEMPERATURE SENSOR
IC701 μPC1237HA OVER LOAD PROTECT
OFFSET
OVER LOAD
AC OFF
RY
D702 D703
D701 Q701
HP AMP
IC651
Q661
Q652
Q651
S.MUTE
J2 SUPER WOOFER
J891
TO SATELLITE UNIT IMPEDANCE USE 8 ~ 16Ω
SPEAKER
TO BASS UNIT IMPEDANCE USE 6 ~ 16Ω
(LOW)
(HIGH)
RY802
RY801
J651 HEADPHONES
FL501 DISPLAY
VF
HV
IC502 SN755731 VACUUM FLUORESCENT DRIVERS
IC503 SN755731 VACUUM FLUORESCENT DRIVERS
IC505 SN755731 VACUUM FLUORESCENT DRIVERS
IC501 MSC7162 DRIVERS (GRID)
IC504 MSC7162 DRIVERS (GRID)
DIN
DOUT
CLR
LE
CLK
GDIN
GCLR
GCLK
RY SP
Q909 RY ON/OFF
FAN HP SW
Q911 SWITCHING
Q908 FAN ON/OFF
FAN
Q121 Q129
Q120 Q128
Q125 Q111
2DB 4DB 8DB
ALGMUTE
DOENA
IC106 CXD8245M FORMAT CONVERTER
DATA3
BCK1
LRCK1
X101 16.93MHz
IC109 M37450 DEVICE CONTROLLER
AU OUT
AU IN
FRES
CD OFF
Q118
X102 8MHz
RESET
IC509 XR-1092 BPF
OUT1 OUT2 OUT3 OUT4
SELECT1 SELECT2
IC508 MC68HC11E9-FU FEATURE CONTROL
X502
X501
IC506 TMP91C640F-2301 DISPLAY MICRO COMPUTER
STRA STRB REQUEST
PC0~PC7
P00~P07
PB0~PB6
D523 DELAY
REG D521,522
±12V
±5.6V
KEY
Q508~517 D504~512 D514, 515 LED
Q502~507 SWITCH
IC507 M51953 RESET
Q501 AC OFF DETECT
(AC SENSE)
NMI
Q601 REG
IC601 LB1639
MOTOR DRIVE CONTROL
RV601
VOLUME
LED (VOLUME)
12V
Q126,127 D110
IC112 CXD1160AQ DIGITAL EFFECT PROCESSOR
DEV DATA
DEV CLK
DPACLT
IC111 CXD2701Q DPS+EQ DIGITAL CONTROL
PRGD PRGCK PRGL
2701LT
INIT EQ
CAS RAS WR
A0~A7
I/O 0~I/O 4
IC110 MSM41464-10RS D-RAM
IC332 CDX2560 DIGITAL FILTER
ATT SHLFT LATCH INIT
DFLT
MCLK
256FS
BCK12 DORI3 DOLI4 WCKI5
DATA3 BCK3 LRCK3
IC108 CXD2557M 2CH-SOUND DETECT
DATA2 LRCK2 BCK
MUTE L MUTE R
NO SIGL NO SIGR
Q401~404 HV DC-DC CONVERTER
T401,T402 D401~406 D409
±12V F
Q911,912 REG
±30V
±12V
IC901 M5230L
ERROR AMP
Q901,902 Q904~907 REG
IC902 M5F7805 REG
D910
D920
5.6V
Q903
Q906 SWITCH
POWER
Q904 Q911 Q905
Q910 RY DRIVE
RY901
±27V (POWER AMP)
D901
D919
PT101
POWER TRANSFORMER
S901
VOLTAGE SELECTOR
120V ↔ 240V ↔ 220V
F901 F902
AC IN

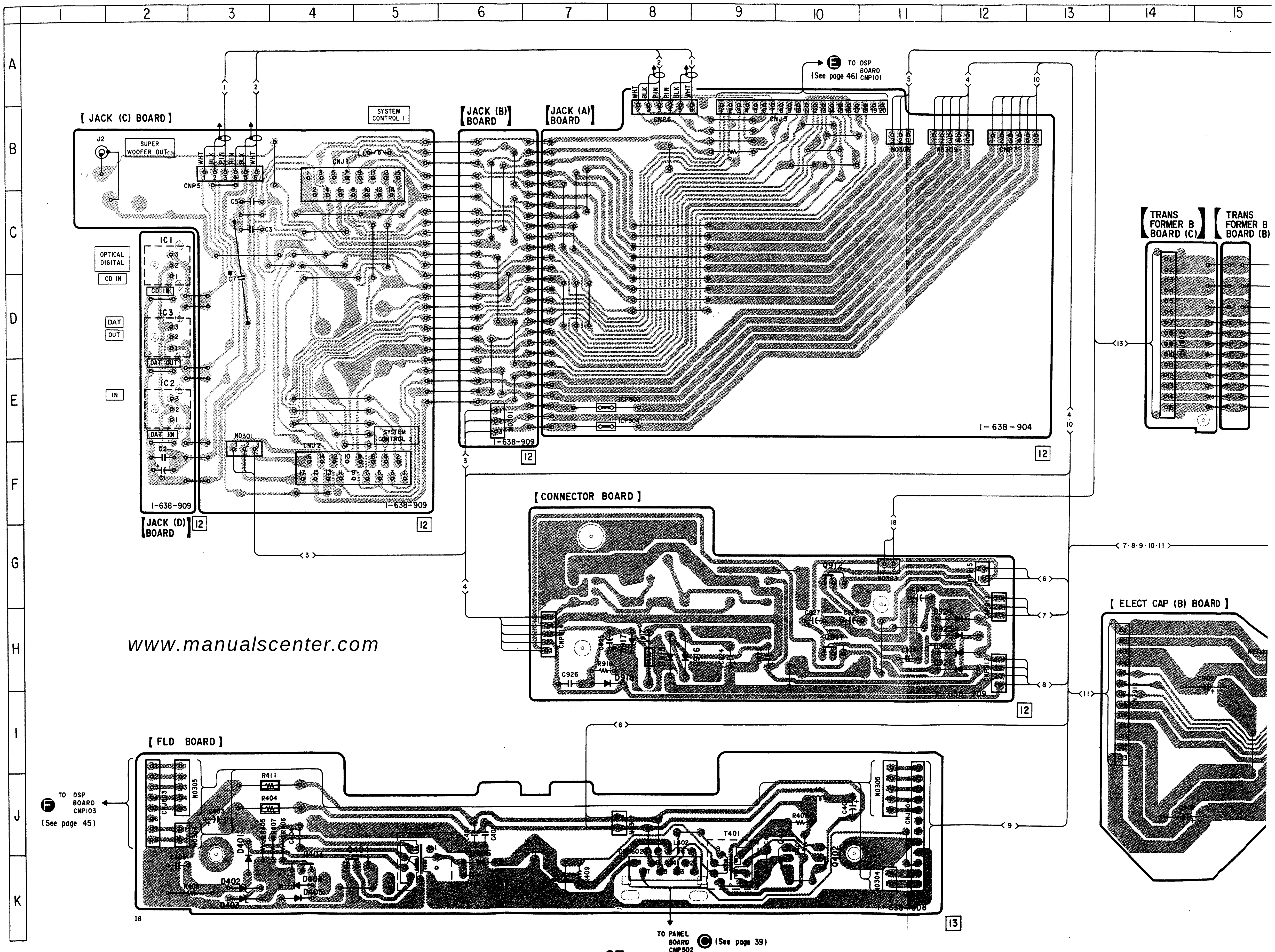
2-6. PRINTED WIRING BOARDS – JACK, POWER SUPPLY SECTION – • See page 16 to 17 for Circuit Boards Location and Semiconductor Lead Layouts.

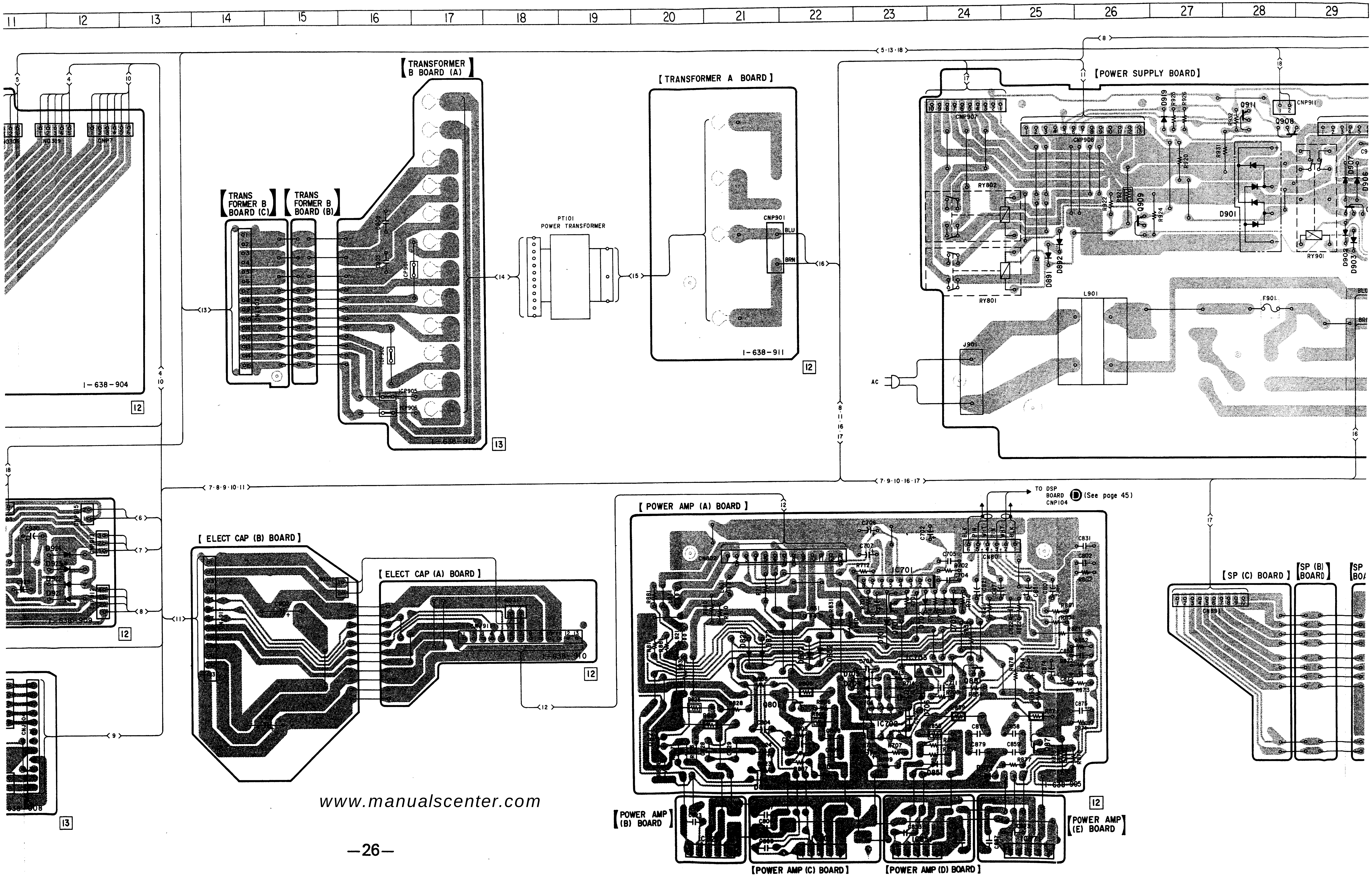
• Semiconductor Location

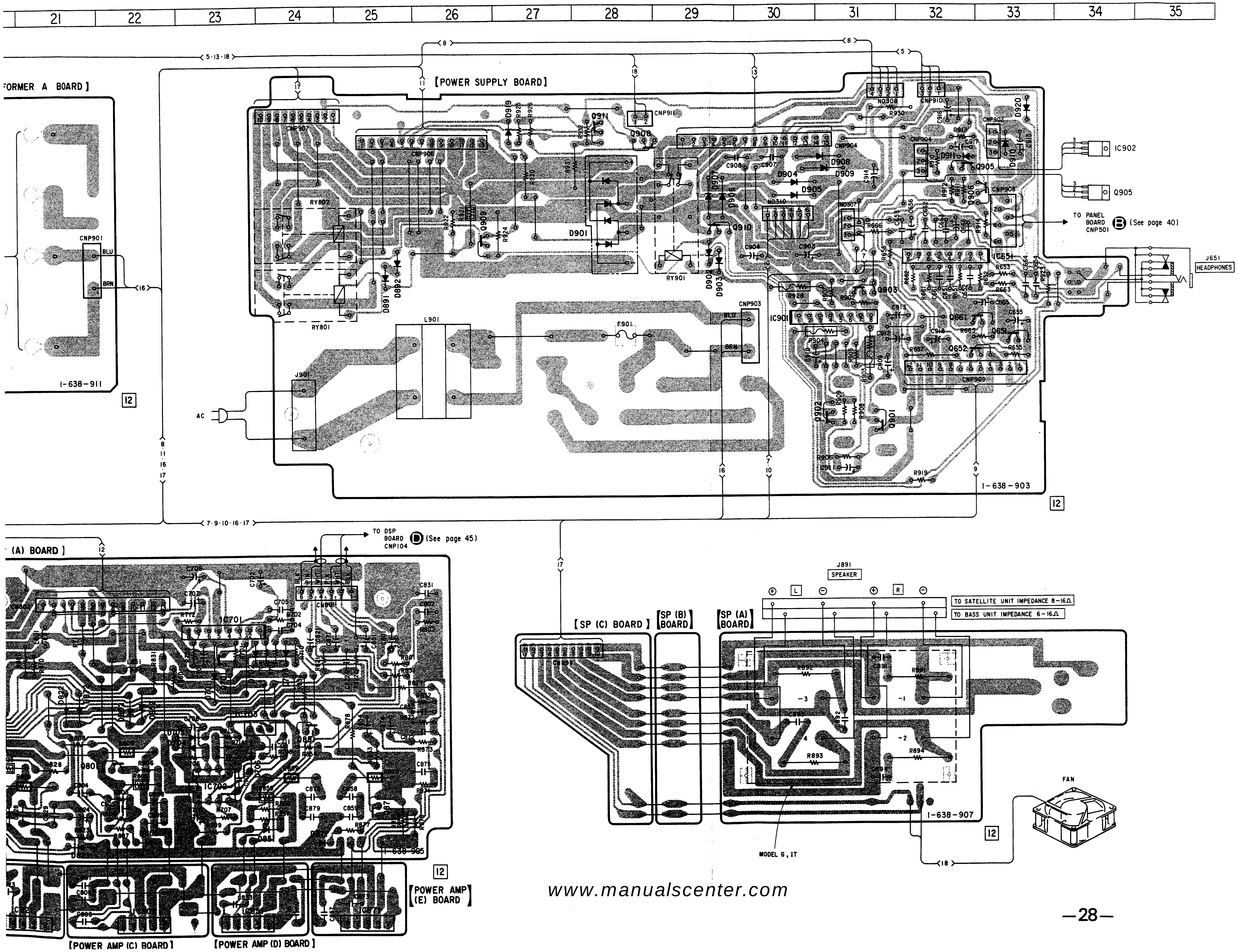
Ref. No.	Location	Ref. No.	Location
D401	J-3	Q403	J-4
D402	J-3	Q404	J-4
D403	J-3	Q651	D-31
D404	J-4	Q652	D-31
D405	J-4	Q661	D-31
D406	J-6	Q701	H-22
D409	J-7	Q801	I-20
D701	H-22	Q821	J-19
D702	H-22	Q851	I-23
D703	H-23	Q871	J-24
D704	I-21	Q901	E-30
D705	I-22	Q902	E-29
D706	I-22	Q903	D-30
D801	J-21	Q904	B-30
D802	I-21	Q905	B-31
D821	J-20	Q906	C-31
D822	I-20	Q907	G-7
D851	J-22	Q908	B-27
D852	I-21	Q909	C-25
D871	J-23	Q910	C-28
D872	I-20	Q911	H-20
D891	D-24	Q911	B-26
D892	C-24	Q912	G-10
D901	C-26		
D902	C-28		
D903	B-29		
D904			
D905			
D906	C-28		
D907	C-28		
D908	B-29		
D909	B-29		
D910	B-31		
D911	B-31		
D912	G-8		
D913	G-8		
D914	G-8		
D915	H-8		
D916	H-8		
D917	H-7		
D918	H-7		
D919	B-25		
D920	B-31		
D921	H-11		
D922	H-11		
D923	G-11		
D924	G-11		
IC1	C-2		
IC2	E-2		
IC3	D-2		
IC651	C-31		
IC701	H-22		
IC702	J-22		
IC703	I-22		
IC801	K-21		
IC821	K-19		
IC851	K-22		
IC871	K-24		
IC901	D-29		
IC902	B-31		
Q401	J-9		
Q402	J-10		

Note on Mounting Diagram :

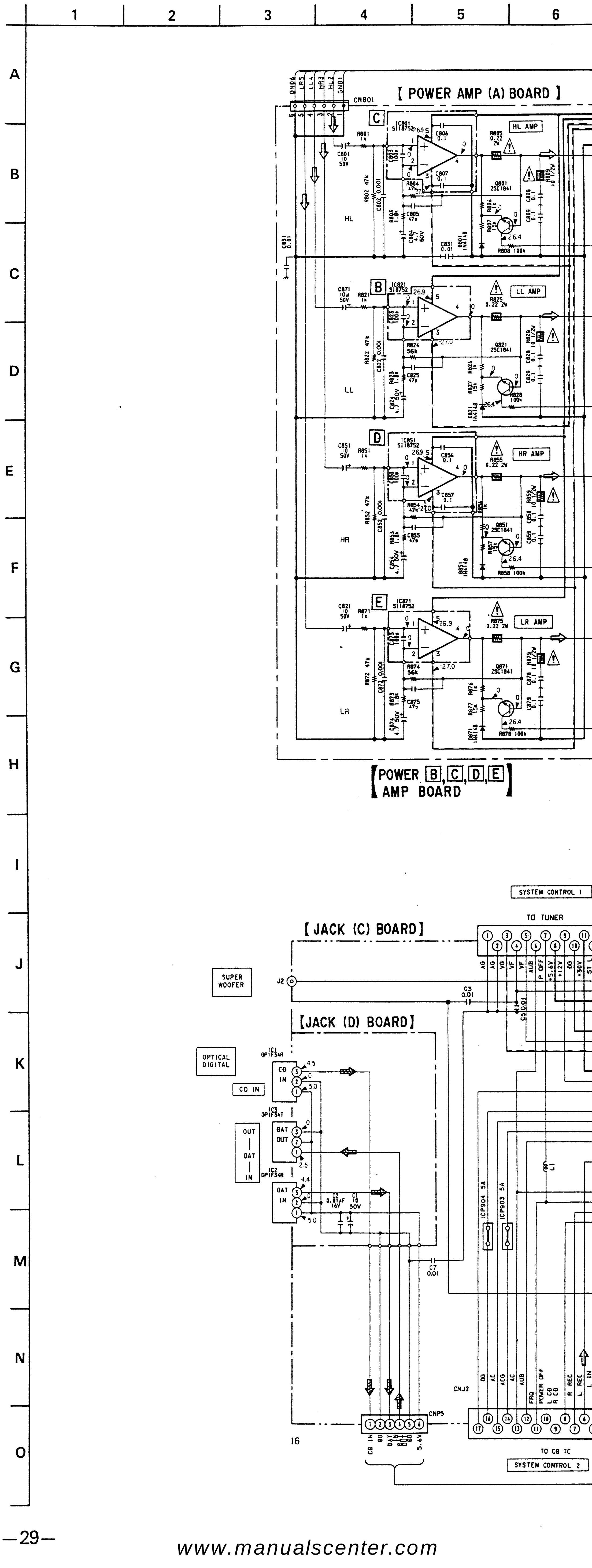
- ● ○—— : Parts extracted from the component side.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
[JACK (C) BOARD]
J2
SUPER WOOFER OUT
SYSTEM CONTROL 1
CNP5
WHT
BLK
P.IN
CNJ1
C5
C3
C7
IC1
IC2
IC3
OPTICAL DIGITAL
CD IN
DAT OUT
IN
N0301
CNJ2
SYSTEM CONTROL 2
C2
C1
1-638-909
JACK (D) BOARD
12
[JACK (B) BOARD]
[JACK (A) BOARD]
CNP6
CNJ3
TO DSP BOARD CNP101
E
(See page 46)
N0308
N0309
CNP7
ICP903
ICP904
1-638-904
TRANS FORMER B BOARD (C)
TRANS FORMER B BOARD (B)
〈13〉
[CONNECTOR BOARD]
Q912
N0303
C927
C928
Q911
D924
D925
D922
D921
D915
D916
D917
D918
C926
R918
1-638-909
〈6〉
〈7〉
〈8〉
〈3〉
〈7·8·9·10·11〉
〈11〉
[ELECT CAP (B) BOARD]
C902
[FLD BOARD]
R411
R404
R403
R405
R406
R407
R409
R401
D401
D402
D403
D404
D405
Q403
Q404
Q402
T401
L402
C401
C405
N0305
N0304
CNJ103
CNJ104
TO DSP BOARD CNP103
F
(See page 45)
TO PANEL BOARD CNP502
C
(See page 39)
16
1-638-908
13
〈9〉


11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
[TRANSFORMER B BOARD (A)]
[TRANSFORMER A BOARD]
[POWER SUPPLY BOARD]
[TRANS FORMER B BOARD (C)]
[TRANS FORMER B BOARD (B)]
PT101 POWER TRANSFORMER
CNP901
BLU
BRN
1-638-911
1-638-904
1-638-912
CNP7
CNP907
CNP906
CNP911
Q908
Q911
Q909
D901
RY802
RY801
RY901
D891
D892
D902
D903
D906
D907
L901
F901
J901
AC
[ELECT CAP (B) BOARD]
[ELECT CAP (A) BOARD]
[POWER AMP (A) BOARD]
TO DSP BOARD CNP104 D (See page 45)
IC701
IC703
IC702
CN801
CN802
[SP (C) BOARD]
[SP (B) BOARD]
[POWER AMP (B) BOARD]
[POWER AMP (C) BOARD]
[POWER AMP (D) BOARD]
[POWER AMP (E) BOARD]
5·13·18
7·8·9·10·11
7·9·10·16·17


21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
5·13·18
8
5
FORMER A BOARD]
CNP901
BLU
BRN
16
1-638-911
12
[POWER SUPPLY BOARD]
CNP907
CNP906
CNP911
CNP904
CNP910
CNP902
CNP908
CNP903
CNP909
RY802
RY801
RY901
L901
F901
J901
AC
IC901
IC902
IC651
Q905
Q908
Q909
Q910
Q901
Q902
Q903
Q651
Q652
Q661
D901
D902
D903
D904
D905
D906
D907
D908
D909
D910
D911
D919
D920
D891
D892
TO PANEL BOARD CNP501
B
(See page 40)
J651
HEADPHONES
1-638-903
12
8
11
16
17
7·9·10·16·17
(A) BOARD]
TO DSP BOARD CNP104
D
(See page 45)
IC701
IC702
Q801
1-638-905
12
[POWER AMP (E) BOARD]
[POWER AMP (C) BOARD]
[POWER AMP (D) BOARD]
J891
SPEAKER
L
R
TO SATELLITE UNIT IMPEDANCE 8-16Ω
TO BASS UNIT IMPEDANCE 6-16Ω
[SP (C) BOARD]
[SP (B) BOARD]
[SP (A) BOARD]
R891
R892
R893
R894
1-638-907
12
MODEL G, IT
FAN
18

2-7. SCHEMATIC DIAGRAM – JACK, POWER SUPPLY SECTION – • See page 9 to 15 for


1
2
3
4
5
6
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
[POWER AMP (A) BOARD]
CN801
GND1
HL2
HR3
LL4
LR5
GND6
C
IC801 SI18752
B
IC821 SI18752
D
IC851 SI18752
E
IC871 SI18752
HL AMP
LL AMP
HR AMP
LR AMP
Q801 2SC1841
Q821 2SC1841
Q851 2SC1841
Q871 2SC1841
HL
LL
HR
LR
[POWER B,C,D,E AMP BOARD]
SYSTEM CONTROL 1
TO TUNER
[JACK (C) BOARD]
SUPER WOOFER
J2
C3 0.01
[JACK (D) BOARD]
OPTICAL DIGITAL
IC1 GP1F34R
CD IN
IC3 GP1F34T
OUT | DAT | IN
DAT OUT
IC2 GP1F34R
DAT IN
C2 0.01μF 16V
C1 10 50V
C7 0.01
ICP904 5A
ICP903 5A
L1
CNJ2
CNP5
16
TO CD TC
SYSTEM CONTROL 2

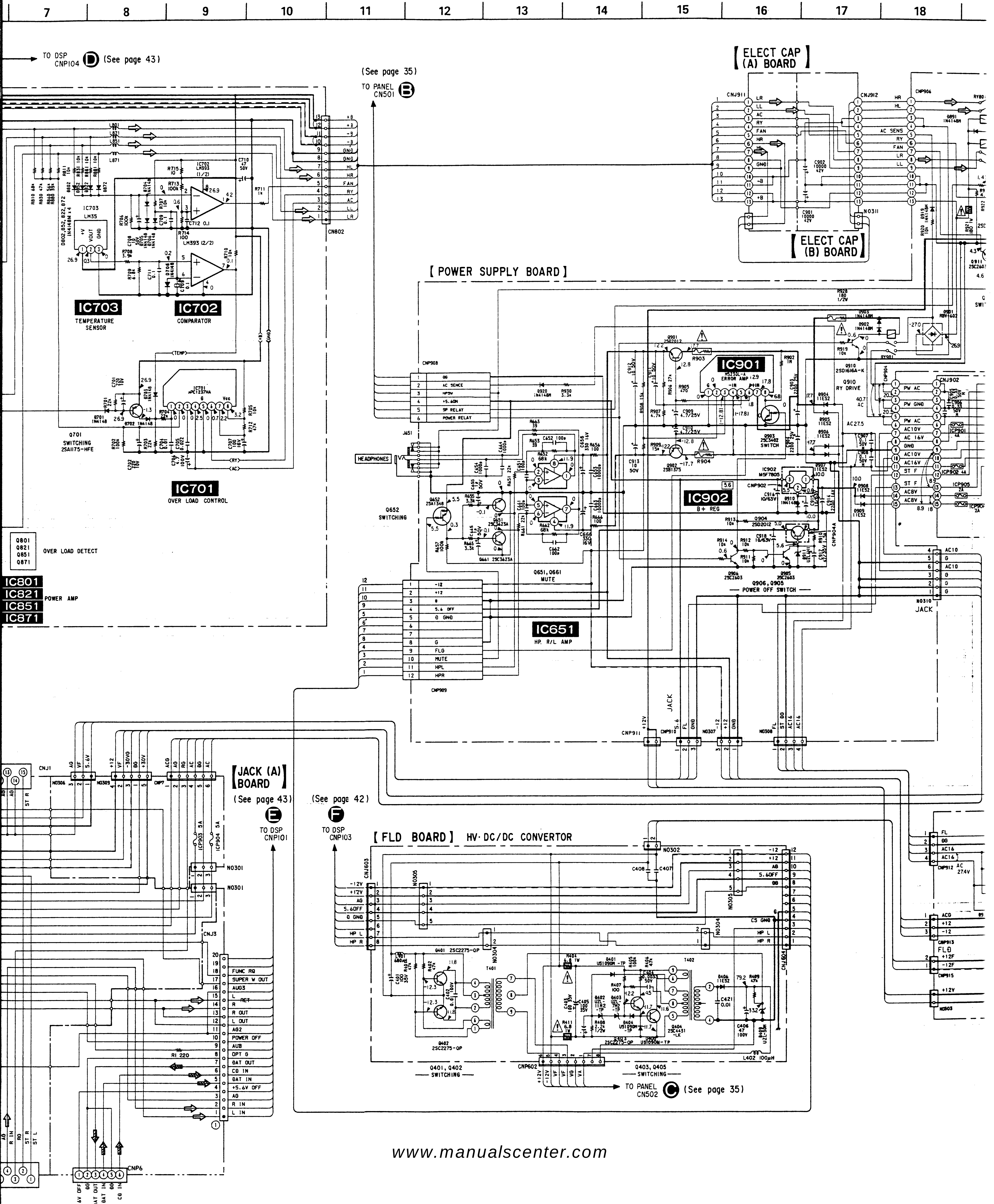
Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

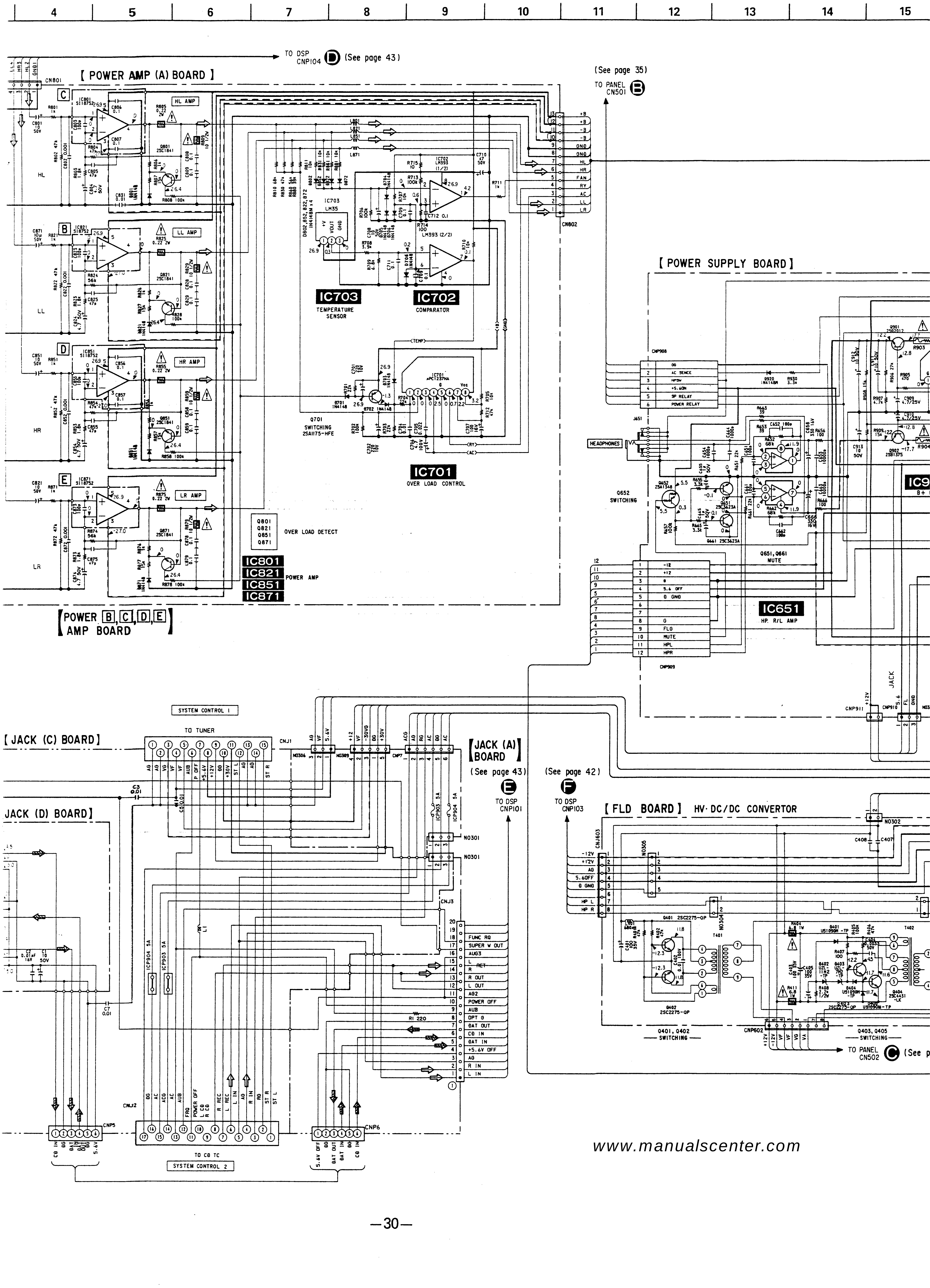
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ━━━ : B + Line.
- ━ ━ ━ : B – Line.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD, VIDEO 1
- Voltages are taken with a VOM (input impedance 10 MΩ).
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : sound signal
  - ⇨ : CD
  - ⇨ : digital out

C Pin Description and Page 18 to 20 for IC Block Diagrams.


7
8
9
10
11
12
13
14
15
16
17
18
TO DSP CNP104 D (See page 43)
(See page 35) TO PANEL CN501 B
ELECT CAP (A) BOARD
ELECT CAP (B) BOARD
POWER SUPPLY BOARD
IC703
TEMPERATURE SENSOR
IC702
COMPARATOR
IC701
OVER LOAD CONTROL
Q701 SWITCHING 2SA1175-HFE
Q801 Q821 Q851 Q871
OVER LOAD DETECT
IC801 IC821 IC851 IC871
POWER AMP
CN802
IC901
ERROR AMP
IC902
B+ REG
IC651
HP. R/L AMP
Q651, Q661 MUTE
Q652 SWITCHING
HEADPHONES
Q906, Q905 POWER OFF SWITCH
Q910 RY DRIVE
Q903 SWITCH
JACK
CNP908
CNP909
CNP911
CNP910
NO307
NO308
NO310
JACK (A) BOARD
(See page 43) E TO DSP CNP101
(See page 42) F TO DSP CNP103
FLD BOARD HV·DC/DC CONVERTOR
Q401, Q402 SWITCHING
Q403, Q405 SWITCHING
TO PANEL CN502 C (See page 35)
CNP602
CNJ603
CNJ604
NO302
NO301
CNJ1
CNJ3
CNP6
CNP7
FUNC RQ
SUPER W OUT
AUG3
R OUT
L OUT
AG2
POWER OFF
AUB
OPT G
DAT OUT
CD IN
DAT IN
+5.6V OFF
AG
R IN
L IN
FLD
CNP912
CNP913
CNP915
NO303

SUPPLY SECTION — • See page 9 to 15 for IC Pin Description and Page 18 to 20 for IC Block Diagrams.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11
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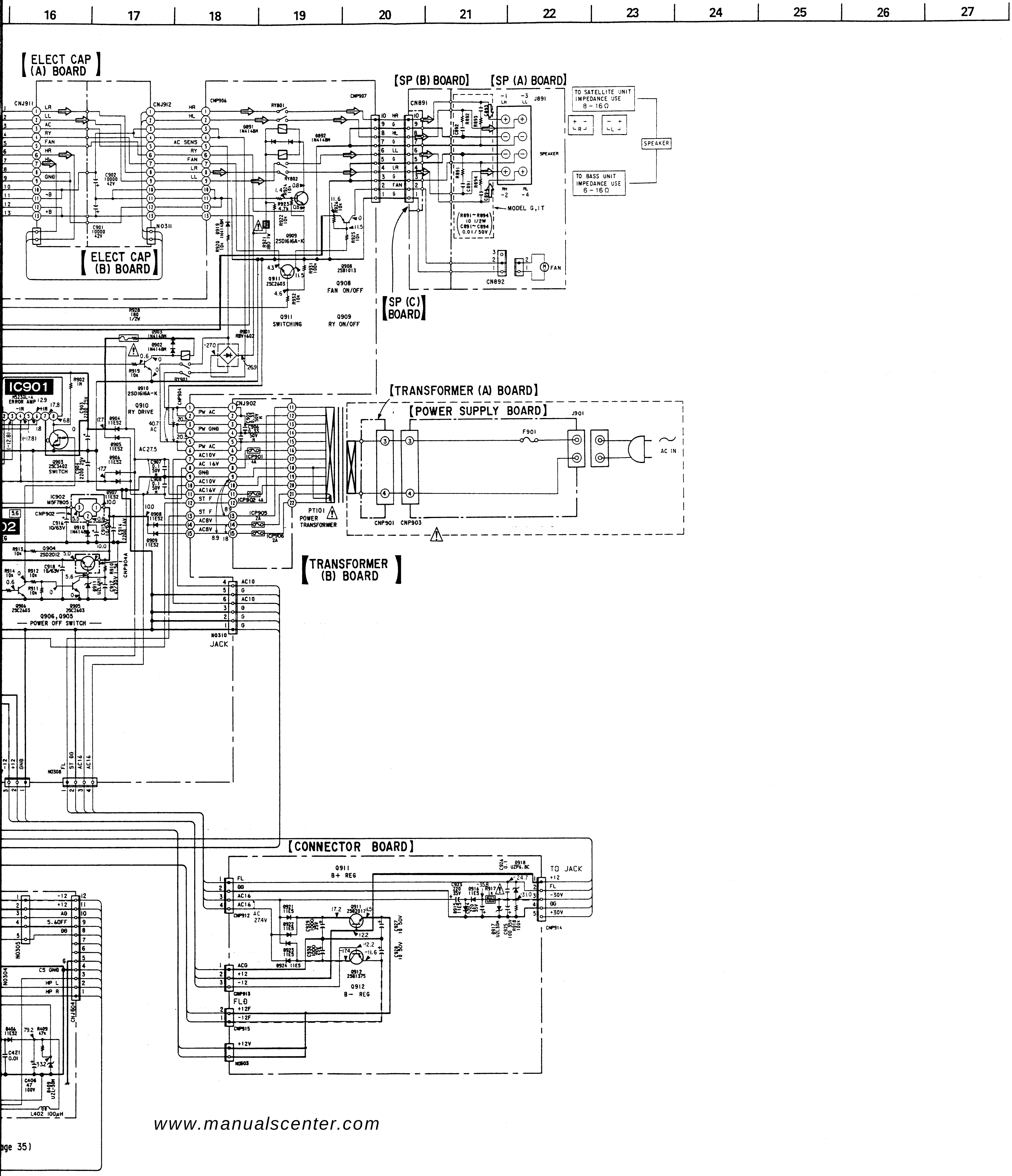
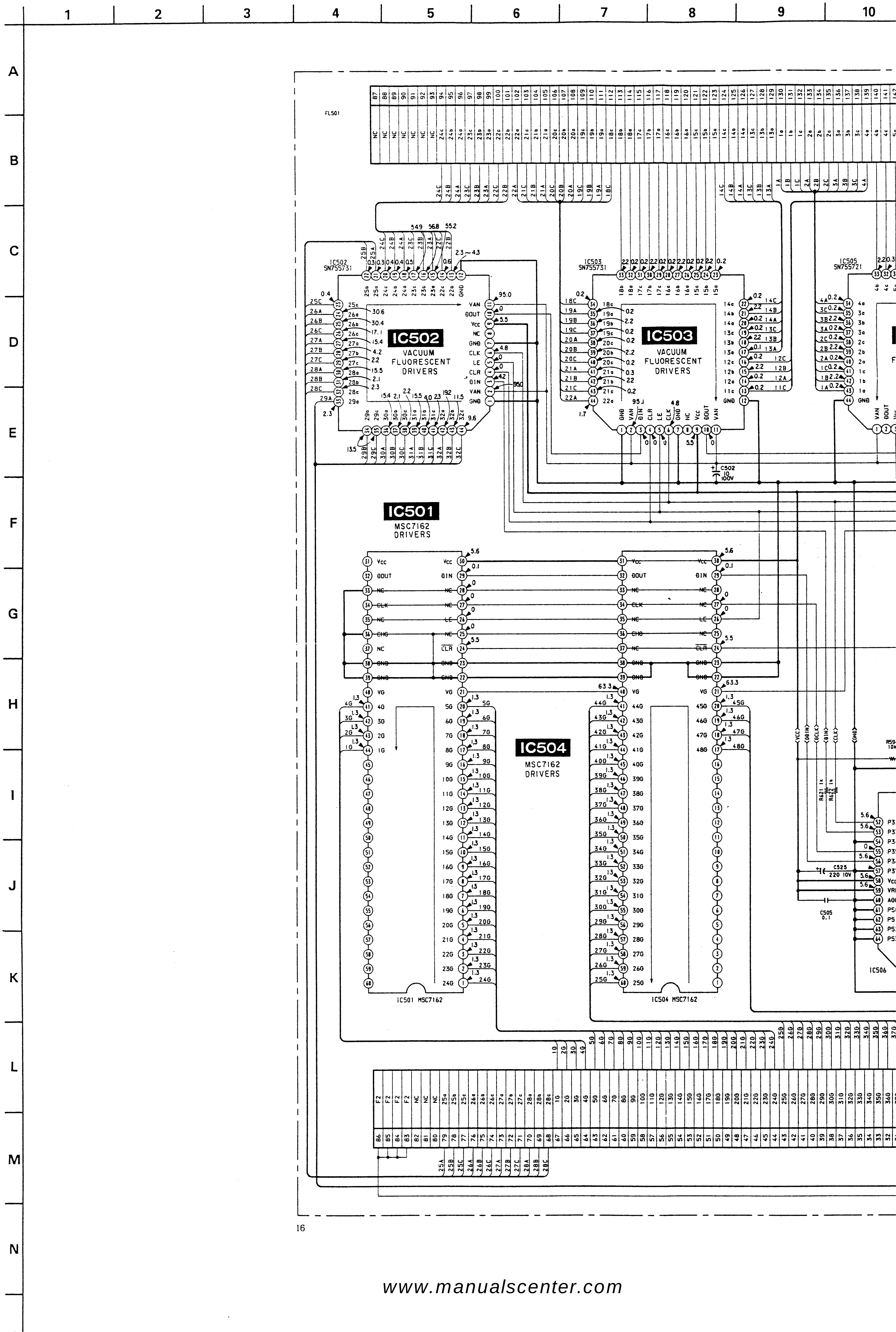
13
14
15
TO DSP CNP104 D (See page 43)
[POWER AMP (A) BOARD]
CN801
(See page 35)
TO PANEL CN501 B
HL AMP
LL AMP
HR AMP
LR AMP
IC801 S118752
IC821 S118752
IC851 S118752
IC871 S118752
Q801 2SC1841
Q821 2SC1841
Q851 2SC1841
Q871 2SC1841
HL
LL
HR
LR
IC703 LM35
IC703
TEMPERATURE SENSOR
IC702 LM393 (1/2)
LM393 (2/2)
IC702
COMPARATOR
IC701 μPC1237HA
IC701
OVER LOAD CONTROL
Q701 SWITCHING 2SA1175-HFE
D802,852,822,872 1N4148M ×4
(TEMP)
(RY)
(AC)
(B)
(GND)
+B
+B
-B
-B
GND
GND
HL
HR
FAN
RY
AC
LL
LR
CN802
Q801
Q821
Q851
Q871
OVER LOAD DETECT
IC801
IC821
IC851
IC871
POWER AMP
[POWER B, C, D, E AMP BOARD]
[POWER SUPPLY BOARD]
CNP908
0G
AC SENCE
HP5W
+5.6ON
SP RELAY
POWER RELAY
J451
HEADPHONES
Q652 SWITCHING
Q651, Q661 MUTE
Q452 2SA1348
Q451 2SC3623A
Q661 2SC3623A
IC651
HP. R/L AMP
-12
+12
5.6 OFF
0 GND
G
FLG
MUTE
HPL
HPR
CNP909
Q901 2SD2012
Q902 2SB1375
IC9
B+
JACK
CNP911
CNP910
SYSTEM CONTROL 1
TO TUNER
[JACK (C) BOARD]
CNJ1
N0306
N0309
CNP7
[JACK (A) BOARD]
(See page 43)
E
TO DSP CNP101
(See page 42)
F
TO DSP CNP103
JACK (D) BOARD]
ICP903 5A
ICP904 5A
N0301
N0301
CNJ3
FUNC RQ
SUPER W OUT
AUG3
L RET
R
R OUT
L OUT
AG2
POWER OFF
AUB
OPT G
DAT OUT
CD IN
DAT IN
+5.6V OFF
AG
R IN
L IN
R1 220
CNJ2
CNP5
CNP6
TO CD TC
SYSTEM CONTROL 2
CD IN
DG
DAT IN
DAT OUT
5.6V
5.6V OFF
[FLD BOARD] HV·DC/DC CONVERTOR
CNJ603
N0305
N0304
N0302
-12V
+12V
AG
5.6OFF
0 GND
HP L
HP R
Q401 2SC2275-QP
Q402 2SC2275-QP
Q401, Q402 SWITCHING
Q403, Q405 SWITCHING
T401
T402
CNP602
TO PANEL CN502 C (See p


16
17
18
19
20
21
22
23
24
25
26
27
ELECT CAP (A) BOARD
ELECT CAP (B) BOARD
CNJ911
CNJ912
CNP906
CNP907
RY801
RY802
C902 10000 42V
C901 10000 42V
NO311
Q908 FAN ON/OFF
Q909 RY ON/OFF
Q911 SWITCHING
SP (B) BOARD
SP (A) BOARD
SP (C) BOARD
CN891
J891
TO SATELLITE UNIT IMPEDANCE USE 8 – 16Ω
TO BASS UNIT IMPEDANCE USE 6 – 16Ω
SPEAKER
MODEL G, IT
FAN
CN892
IC901
ERROR AMP
Q903 2SC3402 SWITCH
Q910 RY DRIVE
IC902 M5F7805
Q906, Q905 POWER OFF SWITCH
CNP902
CNP904
CNJ902
TRANSFORMER (A) BOARD
POWER SUPPLY BOARD
TRANSFORMER (B) BOARD
PT101 POWER TRANSFORMER
F901
J901
AC IN
CNP901
CNP903
NO310 JACK
NO308
NO305
NO304
CNJ604
CONNECTOR BOARD
Q911 B+ REG
Q912 B– REG
CNP912
CNP913
CNP914
CNP915
NO803
TO JACK
FLD
L402 100μH
ge 35)

2-8. SCHEMATIC DIAGRAM – PANEL SECTION – • See page 9 to 15 for IC Pin Description and Page 18 to 20 for IC Block Diagrams. See page 29 S


1
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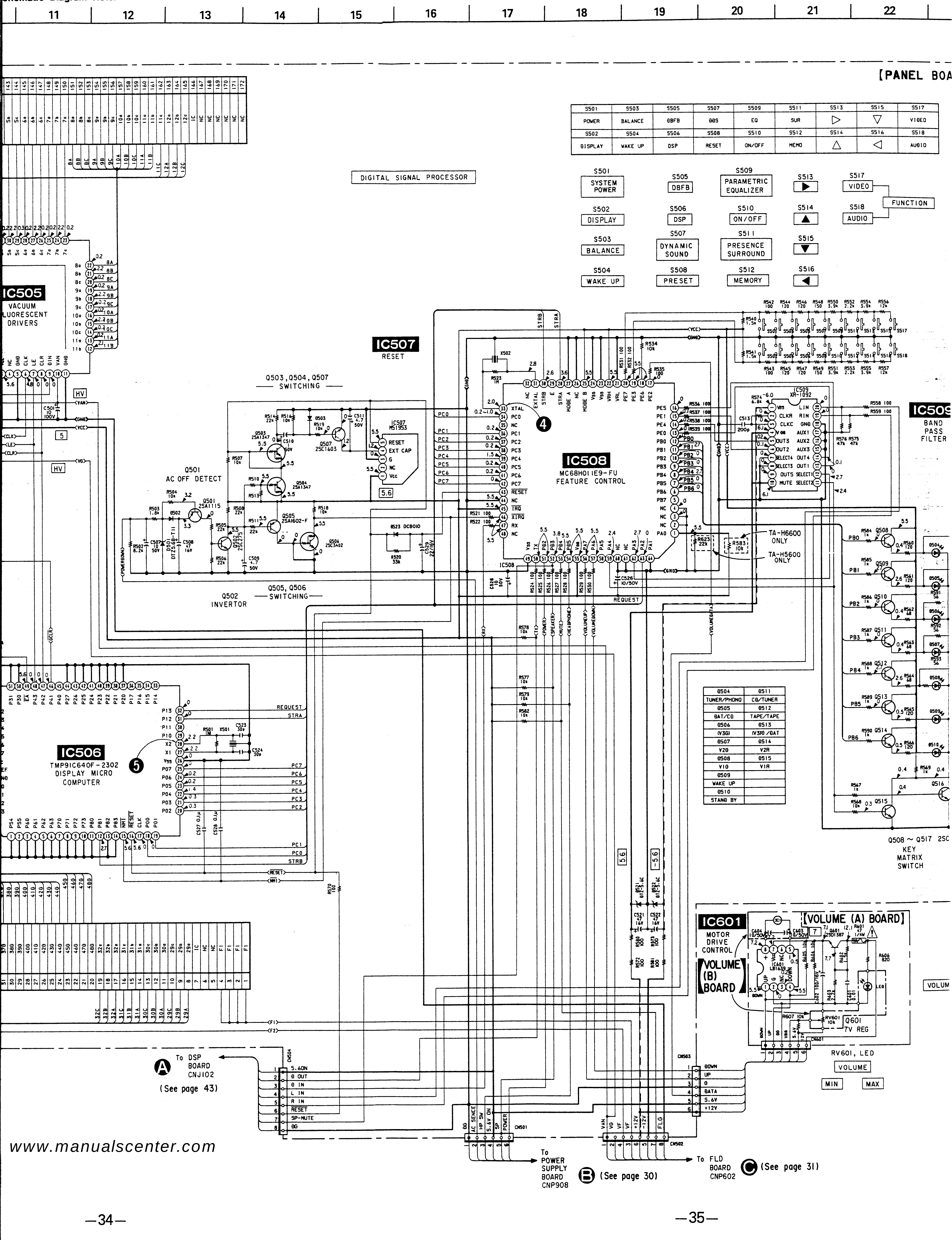
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
FL501
IC502
SN755731
IC502
VACUUM FLUORESCENT DRIVERS
IC503
SN755731
IC503
VACUUM FLUORESCENT DRIVERS
IC505
SN755721
IC501
MSC7162 DRIVERS
IC504
MSC7162 DRIVERS
IC501 MSC7162
IC504 MSC7162
IC506
C502 10 100V
C525 220 10V
C505 0.1
R621 1k
R622 1k
16

chematic Diagram Note.

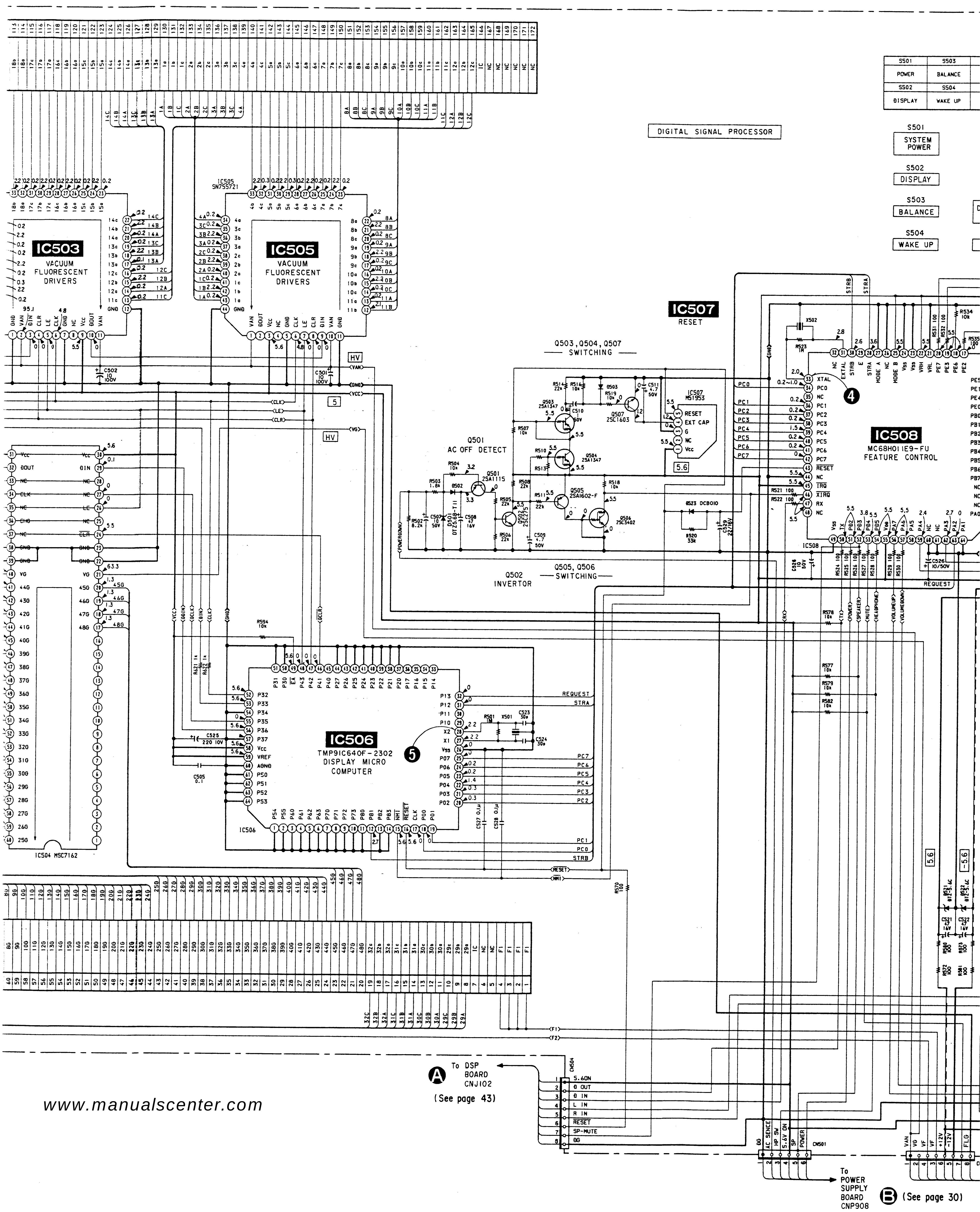

11
12
13
14
15
16
17
18
19
20
21
22
【PANEL BOA
DIGITAL SIGNAL PROCESSOR
S501 SYSTEM POWER
S502 DISPLAY
S503 BALANCE
S504 WAKE UP
S505 DBFB
S506 DSP
S507 DYNAMIC SOUND
S508 PRESET
S509 PARAMETRIC EQUALIZER
S510 ON/OFF
S511 PRESENCE SURROUND
S512 MEMORY
S513
S514
S515
S516
S517 VIDEO
S518 AUDIO
FUNCTION
IC505 VACUUM FLUORESCENT DRIVERS
IC507 RESET
IC507 M51953
Q503, Q504, Q507 SWITCHING
Q501 AC OFF DETECT
Q502 INVERTOR
Q505, Q506 SWITCHING
IC508 MC68HO1IE9-FU FEATURE CONTROL
IC506 TMP91C640F-2302 DISPLAY MICRO COMPUTER
IC509 XR-1092
IC509 BAND PASS FILTER
TA-H6600 ONLY
TA-H5600 ONLY
Q508 ~ Q517 2SC KEY MATRIX SWITCH
IC601 MOTOR DRIVE CONTROL
【VOLUME (A) BOARD】
【VOLUME (B) BOARD
Q601 7V REG
RV601, LED
VOLUME
MIN
MAX
CN504
CN501
CN502
CN503
To DSP BOARD CNJ102 (See page 43)
To POWER SUPPLY BOARD CNP908 (See page 30)
To FLD BOARD CNP602 (See page 31)
REQUEST
STRA
STRB
RESET
NMI
POWERDOWN
VOLUME UP
VOLUME DOWN
5.6ON
D OUT
D IN
L IN
R IN
SP-MUTE
DG
AC SENCE
HP SW
5.6V ON
SP
POWER
VAN
VG
VF
+12V
-12V
FLG
DOWN
UP
D
DATA
5.6V
+12V

S501	S503	S505	S507	S509	S511	S513	S515	S517
POWER	BALANCE	DBFB	DDS	EQ	SUR	▷	▽	VIDEO
S502	S504	S506	S508	S510	S512	S514	S516	S518
DISPLAY	WAKE UP	DSP	RESET	ON/OFF	MEMO	△	◁	AUDIO

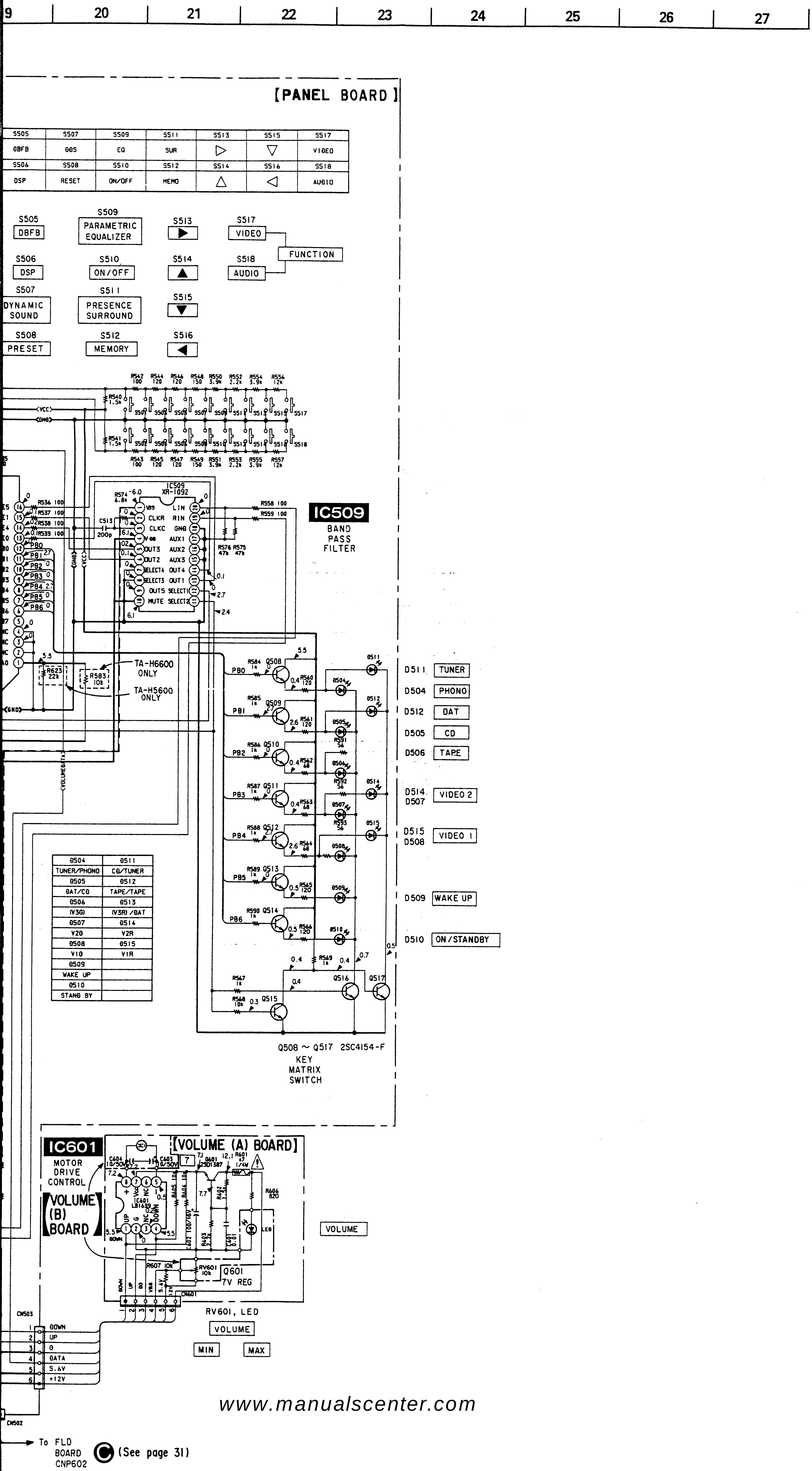
D504	D511
TUNER/PHONO	CD/TUNER
D505	D512
DAT/CD	TAPE/TAPE
D506	D513
(V3G)	(V3R) /DAT
D507	D514
V2G	V2R
D508	D515
V1G	V1R
D509	
WAKE UP	
D510	
STAND BY	

18 to 20 for IC Block Diagrams. See page 29 Schematic Diagram Note.

8 9 10 11 12 13 14 15 16 17 18

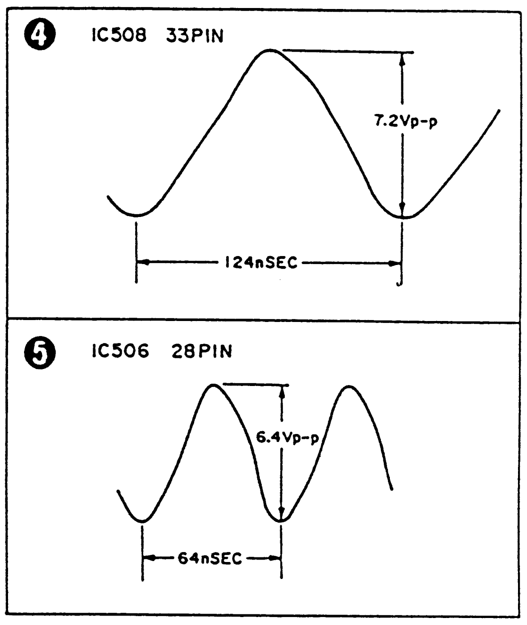


S501
POWER
S503
BALANCE
S502
DISPLAY
S504
WAKE UP
S501 SYSTEM POWER
S502 DISPLAY
S503 BALANCE
S504 WAKE UP
DIGITAL SIGNAL PROCESSOR
IC503
VACUUM FLUORESCENT DRIVERS
IC505
SN755721
IC505
VACUUM FLUORESCENT DRIVERS
IC507
RESET
IC507
M51953
Q503, Q504, Q507
SWITCHING
Q501
AC OFF DETECT
Q502
INVERTOR
Q505, Q506
SWITCHING
IC508
MC68H011E9-FU
FEATURE CONTROL
IC506
TMP91C640F-2302
DISPLAY MICRO COMPUTER
IC504 MSC7162
HV
5
5.6
REQUEST
STRA
STRB
RESET
NMI
F1
F2
CN504
5.6ON
θ OUT
θ IN
L IN
R IN
RESET
SP-MUTE
θG
To DSP BOARD CNJ102
(See page 43)
A
θG
AC SENCE
HP SW
5.6V ON
SP
POWER
CN501
VAN
VG
VF
+12V
-12V
FLG
To POWER SUPPLY BOARD CNP908
B
(See page 30)
4
5

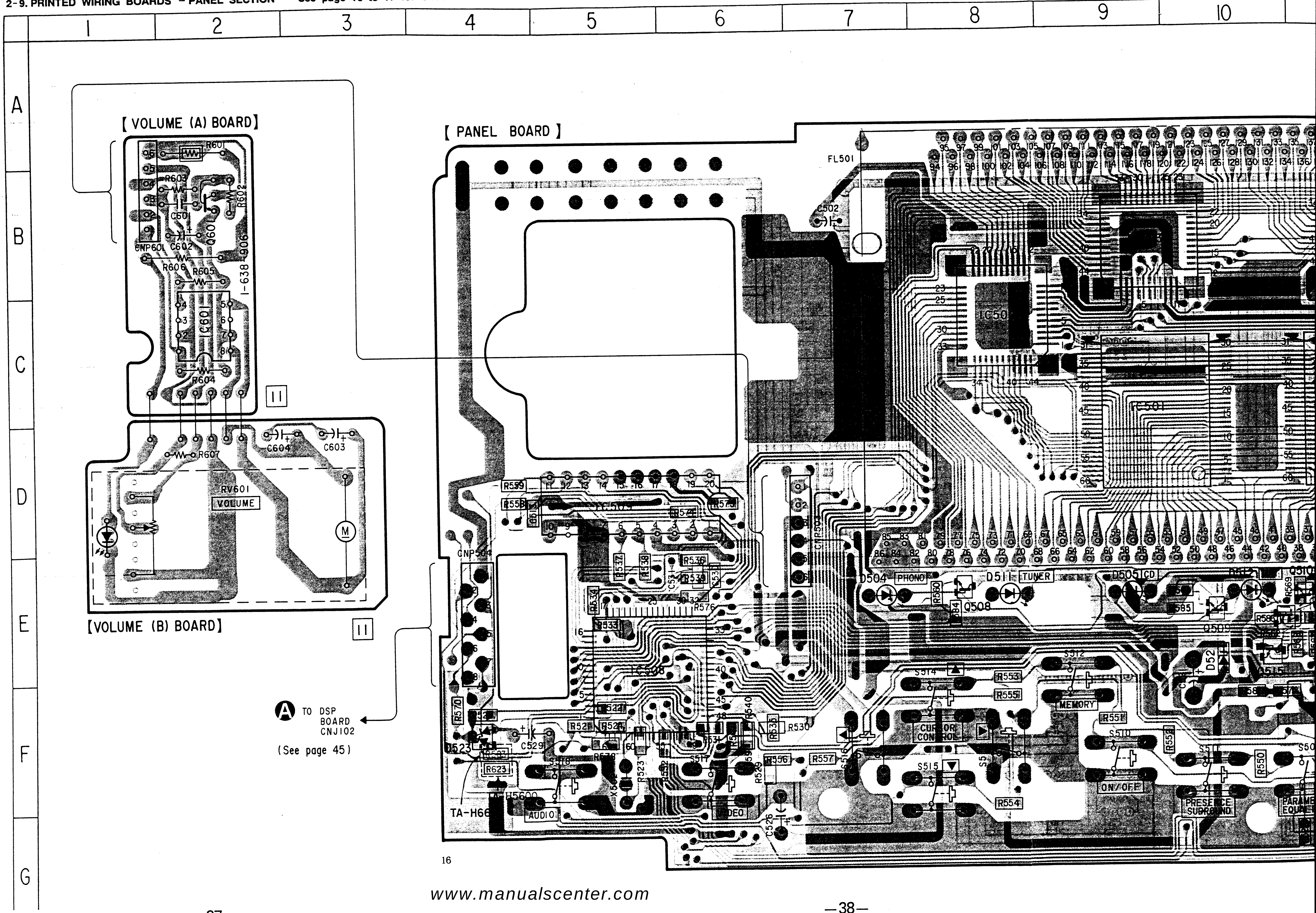

9
20
21
22
23
24
25
26
27
[PANEL BOARD]
S505 DBFB
S506 DSP
S507 DYNAMIC SOUND
S508 PRESET
S509 PARAMETRIC EQUALIZER
S510 ON/OFF
S511 PRESENCE SURROUND
S512 MEMORY
S513
S514
S515
S516
S517 VIDEO
S518 AUDIO
FUNCTION
R540 1.5k
R541 1.5k
R542 100
R544 120
R546 120
R548 150
R550 3.9k
R552 2.2k
R554 3.9k
R556 12k
R543 100
R545 120
R547 120
R549 150
R551 3.9k
R553 2.2k
R555 3.9k
R557 12k
VCC
GND
IC509 XR-1092
IC509
BAND PASS FILTER
VSS
CLKR
CLKC
VDD
OUT3
OUT2
SELECT4
SELECT3
OUT5
MUTE
LIN
RIN
GND
AUX1
AUX2
AUX3
OUT4
OUT1
SELECT1
SELECT2
R574 6.8k
C513 200p
R536 100
R537 100
R538 100
R539 100
R558 100
R559 100
R576 47k
R575 47k
PB0
PB1
PB2
PB3
PB4
PB5
PB6
R623 22k
R583 10k
TA-H6600 ONLY
TA-H5600 ONLY
VOLUME DATA
Q508
Q509
Q510
Q511
Q512
Q513
Q514
Q515
Q516
Q517
R584 1k
R585 1k
R586 1k
R587 1k
R588 1k
R589 1k
R590 1k
R560 120
R561 120
R562 68
R563 68
R564 68
R565 120
R566 120
R591 56
R592 56
R593 56
R567 1k
R568 10k
R569 1k
D511 TUNER
D504 PHONO
D512 DAT
D505 CD
D506 TAPE
D514 D507 VIDEO 2
D515 D508 VIDEO 1
D509 WAKE UP
D510 ON/STANDBY
Q508 ~ Q517 2SC4154-F
KEY MATRIX SWITCH
IC601
MOTOR DRIVE CONTROL
VOLUME (B) BOARD
[VOLUME (A) BOARD]
IC601 LB1639
C604 10/50V
C603 10/50V
Q601 2SD1387
R601 47 1/4W
R602
R603
R604
R605
R606 820
C601
C602 100/16V
LED
R607 10k
RV601 10k
Q601 7V REG
CN601
DOWN
UP
BO
VBB
5.4V
12V
VOLUME
RV601, LED
VOLUME
MIN
MAX
CN503
DOWN
UP
0
DATA
5.6V
+12V
CN502
To FLD BOARD CNP602
(See page 31)

S505	S507	S509	S511	S513	S515	S517
DBFB	DBS	EQ	SUR	▷	▽	VIDEO
S506	S508	S510	S512	S514	S516	S518
DSP	RESET	ON/OFF	MEMO	△	◁	AUDIO

D504	D511
TUNER/PHONO	CD/TUNER
D505	D512
DAT/CD	TAPE/TAPE
D506	D513
(V3G)	(V3R) /DAT
D507	D514
V2G	V2R
D508	D515
V1G	V1R
D509	
WAKE UP	
D510	
STAND BY	



2-9. PRINTED WIRING BOARDS – PANEL SECTION – • See page 16 to 17 for Circuit Boards Location and Semiconductor Lead Layouts.


1
2
3
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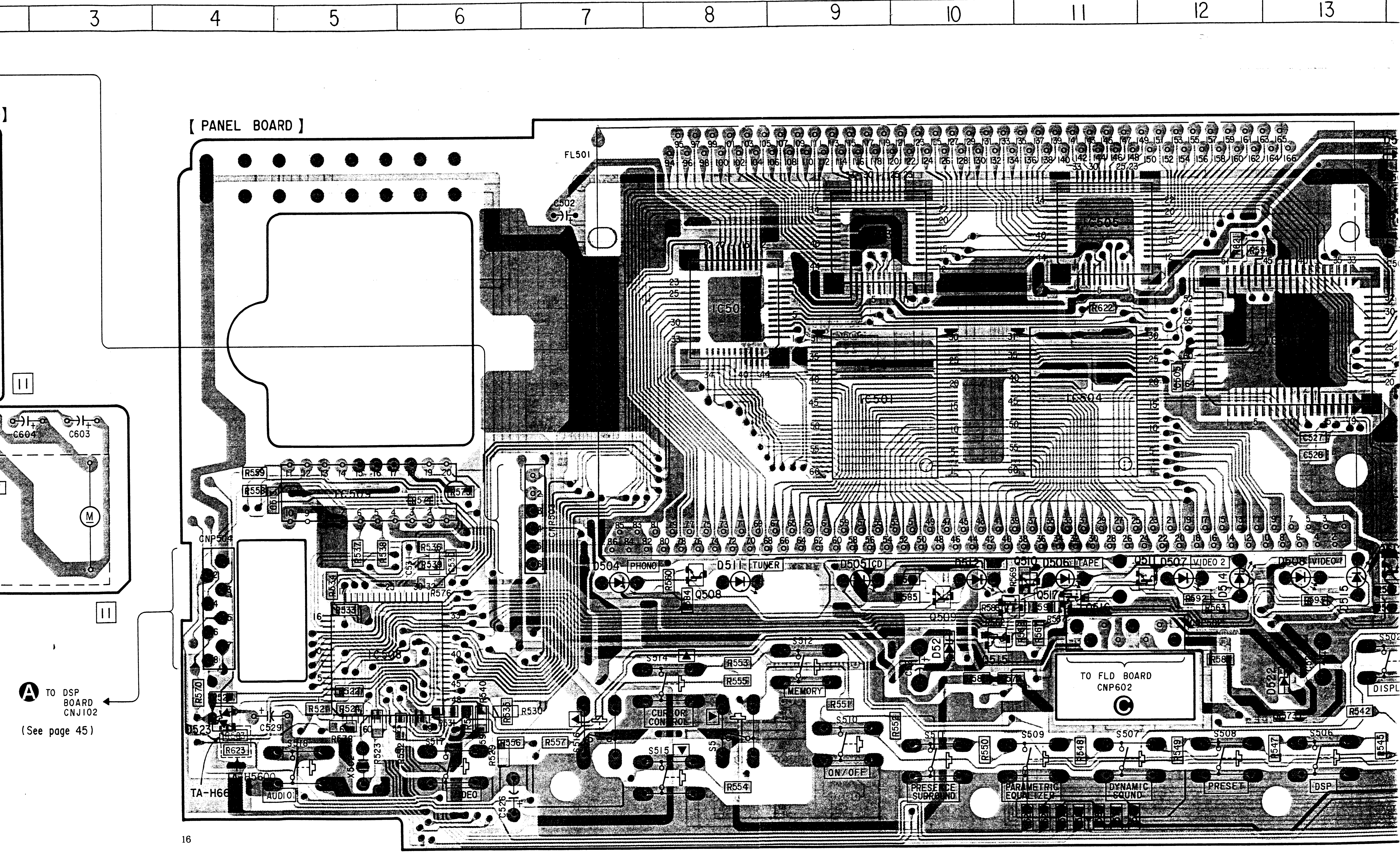
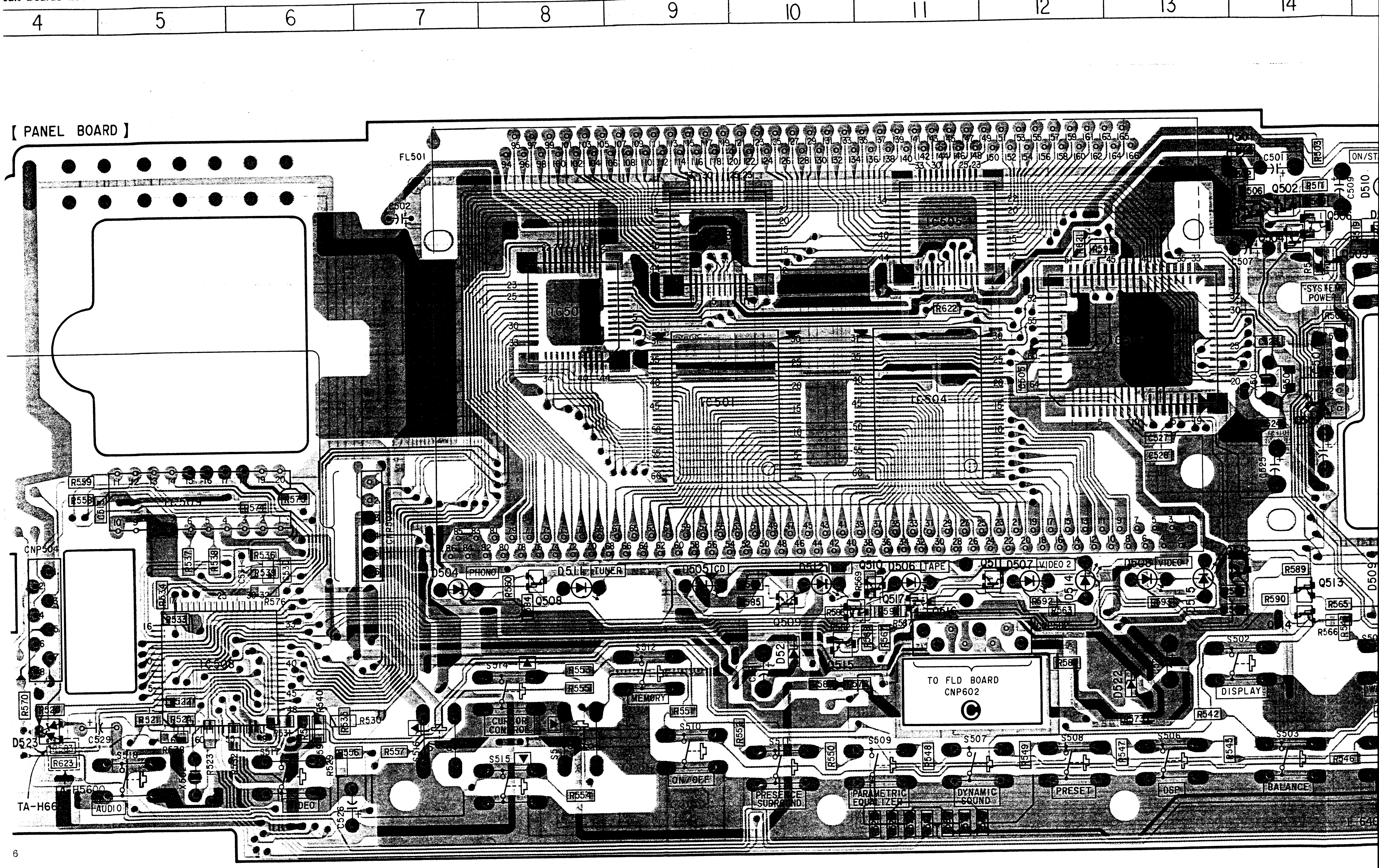
5
6
7
8
9
10
A
B
C
D
E
F
G
【VOLUME (A) BOARD】
R601
R603
R602
C601
Q601
CNP601
C602
R606
R605
1-638-906
IC601
R604
11
R607
C604
C603
RV601
VOLUME
M
【VOLUME (B) BOARD】
11
A
TO DSP BOARD CNJ102
(See page 45)
【PANEL BOARD】
FL501
C502
IC502
IC501
IC503
IC506
CNP504
CNP503
R559
R558
R574
R575
R537
R538
R536
R539
C531
R534
R533
R576
R540
R530
R535
R521
R526
R522
R570
D523
C529
R527
R623
TA-H5600
TA-H66
AUDIO
VIDEO
S518
S517
S516
R578
X501
R523
R532
R529
R556
R557
C526
D504
PHONO
R560
D511
TUNER
D505
CD
Q508
R584
R585
Q509
Q510
R569
D52
S515
S514
S512
R553
R555
MEMORY
CURSOR CONTROL
S513
R554
R551
S510
ON/OFF
R552
S511
R550
PRESENCE SURROUND
PARAMETRIC EQUALIZER
16

TION – • See page 16 to 17 for Circuit Boards Location and Semiconductor Lead Layouts.


3
4
5
6
7
8
9
10
11
12
13
[PANEL BOARD]
FL501
C502
IC505
IC501
IC504
IC503
IC506
R622
C527
C528
CNP504
CNP503
C604
C603
M
11
11
R559
R558
R574
R573
R537
R538
R536
R539
C531
R576
R533
R534
R570
R521
R528
R527
R623
C529
D523
X501
R523
R529
R540
R535
R530
R556
R557
C526
C516
A
TO DSP BOARD CNJ102
(See page 45)
TA-H66
TA-H5600
AUDIO
VIDEO
S518
S517
S514
S515
S512
S510
S511
S509
S507
S508
S506
S502
R553
R555
R554
R551
R552
R550
R548
R549
R547
R545
R542
R560
R584
R585
R569
R592
R563
R593
CURSOR CONTROL
MEMORY
ON/OFF
PRESENCE SURROUND
PARAMETRIC EQUALIZER
DYNAMIC SOUND
PRESET
DSP
DISPL
D504
PHONO
D511
TUNER
D505
CD
D512
Q510
D506
TAPE
Q511
D507
VIDEO 2
D508
VIDEO 1
D514
D515
Q508
Q509
Q517
Q516
D521
D522
TO FLD BOARD CNP602
C
16


4
5
6
7
8
9
10
11
12
13
14
【 PANEL BOARD 】
FL501
C502
C501
ON/STA
Q502
R511
D510
C509
Q503
Q504
C507
IC505
IC501
IC504
IC509
IC508
SYSTEM POWER
R622
R559
R558
R574
R575
R536
R537
R538
R539
R576
R533
CNP504
CNP503
D504 PHONO
D511 TUNER
D505 CD
D506 TAPE
D507 VIDEO 2
D508 VIDEO 1
D512
D514
D515
D509
Q508
Q509
Q510
Q511
Q513
Q514
Q515
Q517
R589
R590
R565
R566
R692
R593
R585
S502 DISPLAY
S503 BALANCE
S506 DSP
S508 PRESET
S507 DYNAMIC SOUND
S509 PARAMETRIC EQUALIZER
S511 PRESENCE SURROUND
S510 ON/OFF
S512 MEMORY
S514 CURSOR CONTROL
S515
S516
S517
S518
TO FLD BOARD CNP602
R542
R545
R546
R547
R548
R549
R550
R551
R552
R553
R554
R555
R556
R557
R530
R540
R570
R521
R523
R524
R623
C526
C529
D523
AUDIO
VIDEO
TA-H5600
TA-H66

6

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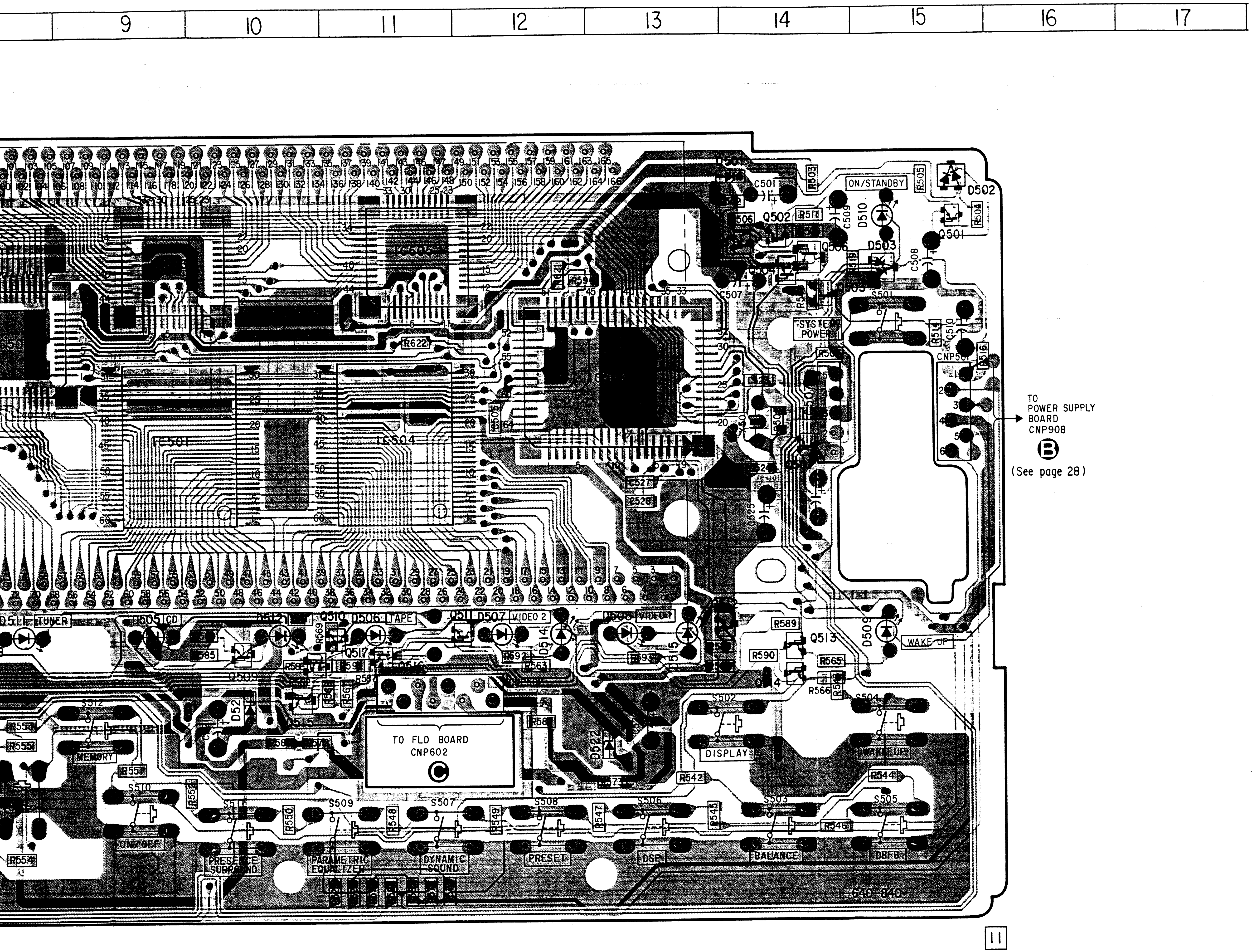

9
10
11
12
13
14
15
16
17
ON/STANDBY
D502
D510
D503
Q501
Q502
C501
D501
IC505
IC501
IC504
SYSTEM POWER
S501
CNP501
TO
POWER SUPPLY
BOARD
CNP908
B
(See page 28)
TUNER
D505 CD
D506 TAPE
D507 VIDEO 2
D508 VIDEO 1
D514
D515
D509
WAKE UP
Q509
Q510
Q513
Q517
R589
R590
R565
R566
S512
MEMORY
S510
ON/OFF
S511
PRESENCE SURROUND
S509
PARAMETRIC EQUALIZER
S507
DYNAMIC SOUND
S508
PRESET
S506
DSP
S502
DISPLAY
S503
BALANCE
S504
WAKE UP
S505
DBFB
D522
R542
R544
R546
TO FLD BOARD
CNP602
C
1-640-840
11

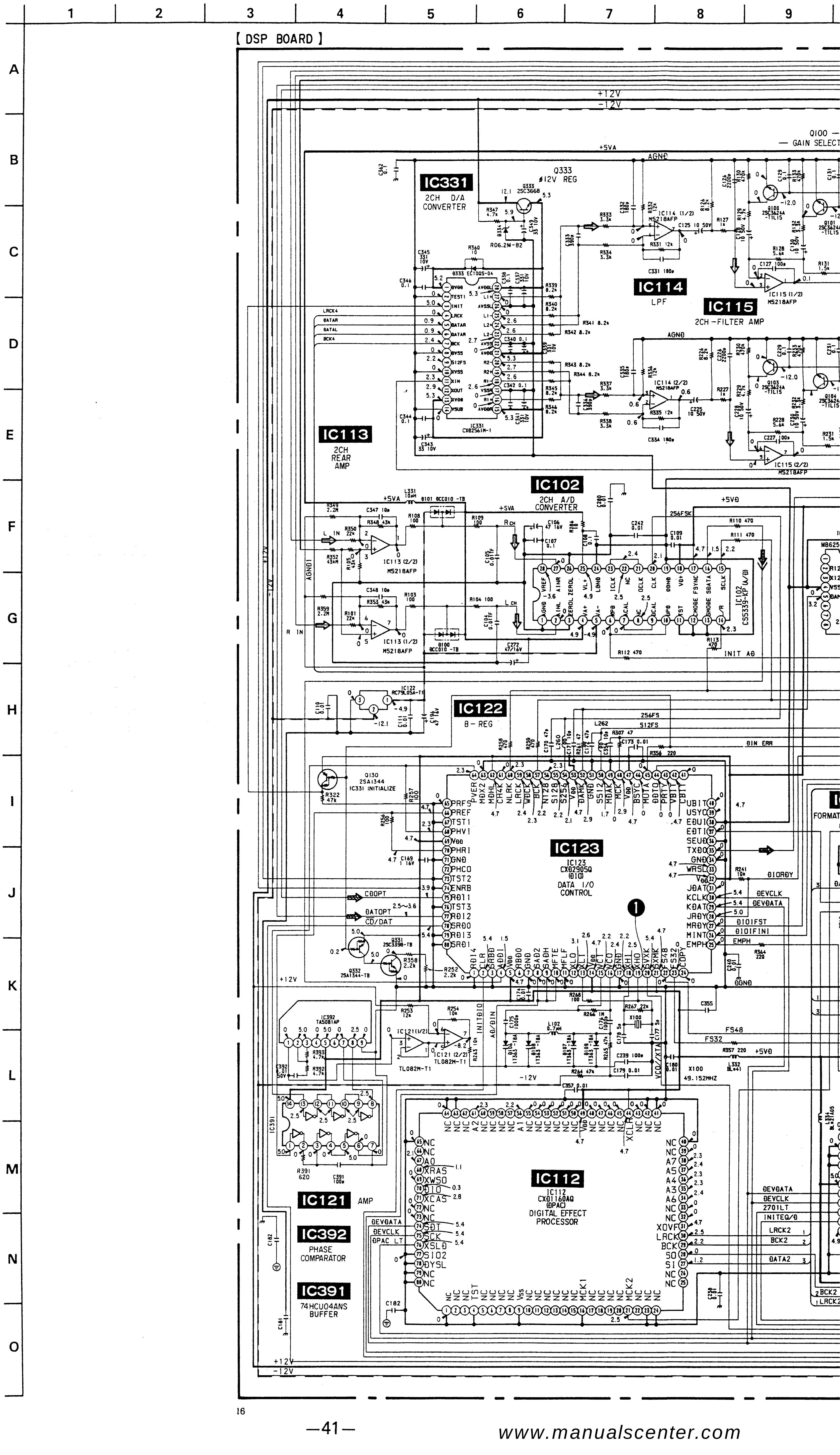
• Semiconductor Location

Ref. No.	Location
D501	B-14
D502	B-15
D503	B-15
D504	E-7
D505	E-9
D506	E-11
D507	E-12
D508	E-13
D509	E-15
D510	B-15
D511	E-18
D512	E-10
D513	E-11
D514	E-12
D515	E-13
D521	E-10
D522	F-13
D523	E-4
IC501	C-9
IC502	C-8
IC503	B-9
IC504	C-11
IC505	B-11
IC506	C-13
IC507	C-14
IC508	E-5
IC509	D-5
Q501	B-15
Q502	B-14
Q503	B-14
Q504	B-14
Q505	B-14
Q506	B-14
Q507	D-14
Q508	E-8
Q509	E-10
Q510	E-11
Q511	E-12
Q512	E-14
Q513	E-14
Q514	E-14
Q515	E-10
Q516	E-11
Q517	E-11

Note on Mounting Diagram :

- o——— : Parts extracted from the component side.
- ⬚← : Indicates side identified with part number.
- ● : Through hole.
- ▩ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

2-10. SCHEMATIC DIAGRAM – DSP SECTION – • See page 9 to 15 for IC Pin Description and Page 18 to 20 for IC Block Diagrams. See


1
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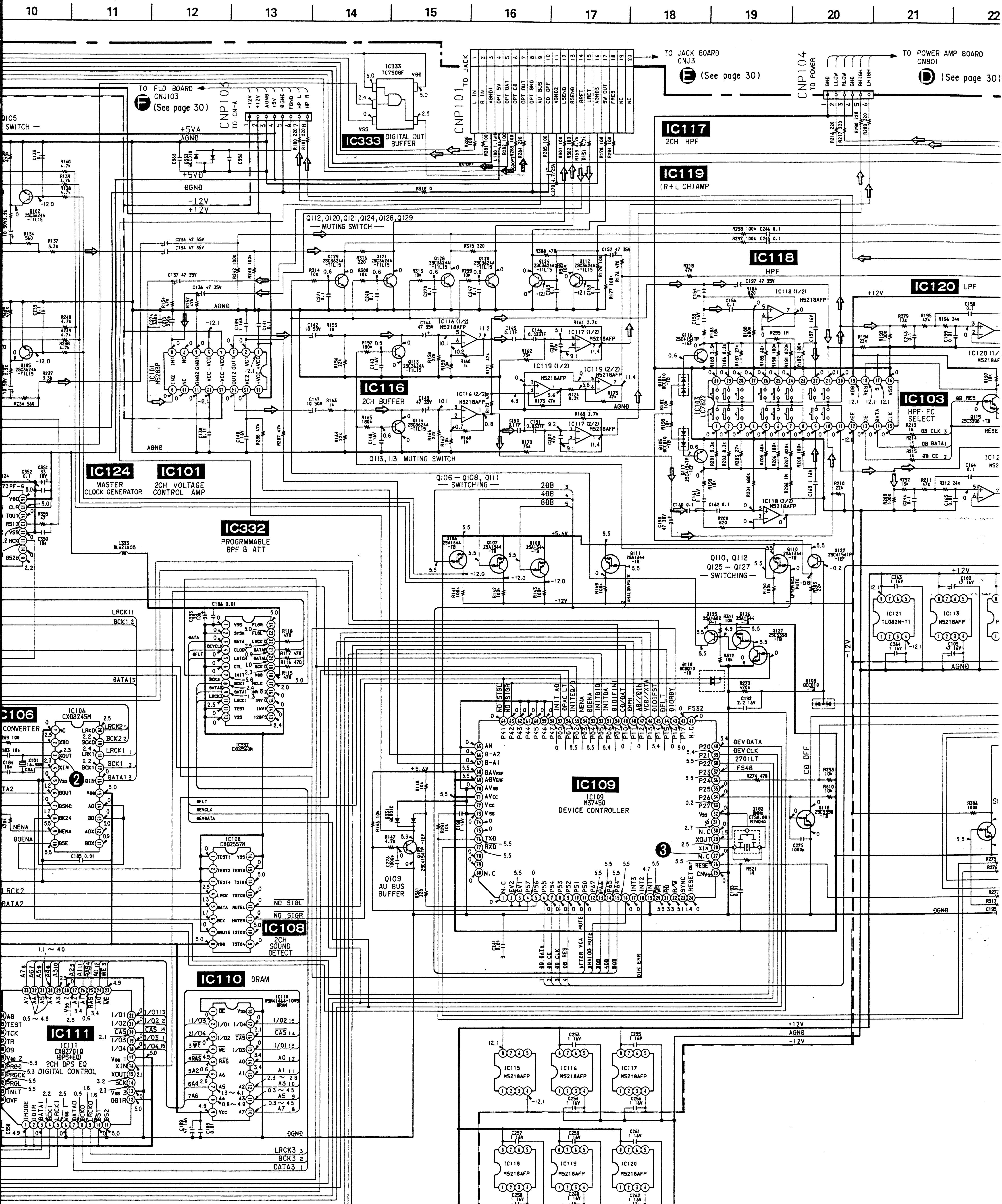
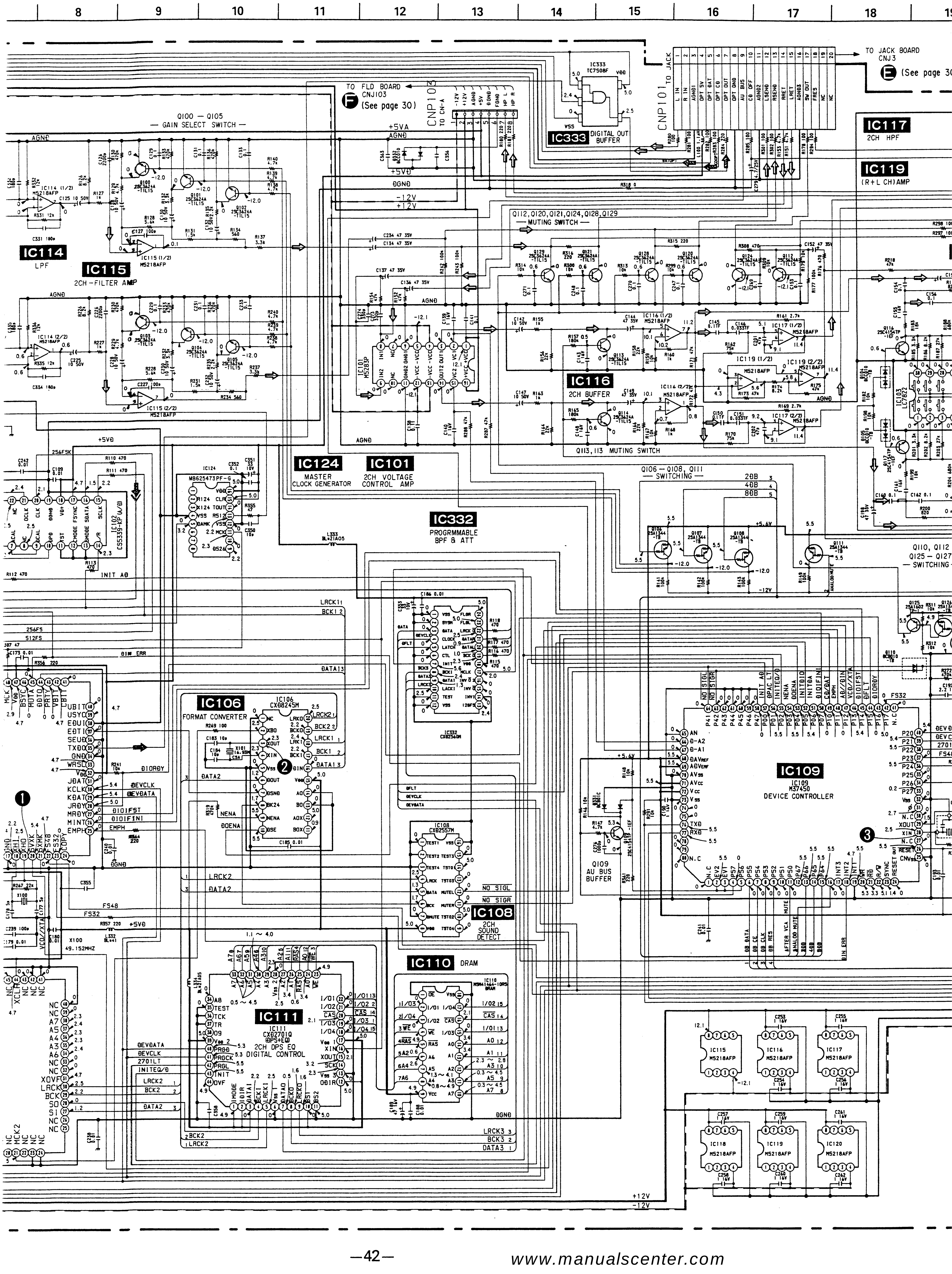
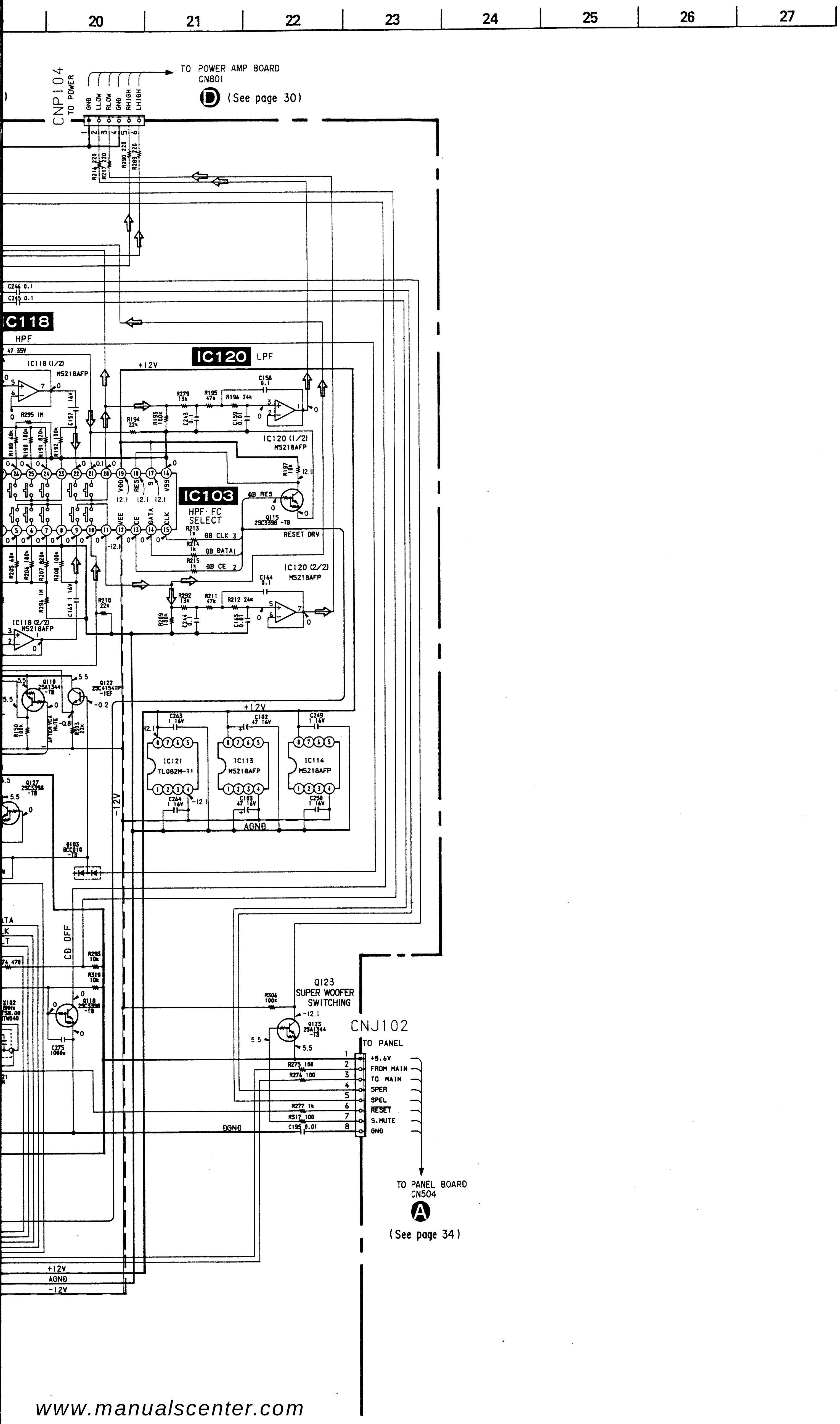
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
[DSP BOARD]
+12V
-12V
+5VA
AGND
Q100
— GAIN SELECT
IC331
2CH D/A CONVERTER
Q333
+12V REG
IC114
LPF
IC115
2CH-FILTER AMP
IC113
2CH REAR AMP
IC102
2CH A/D CONVERTER
+5VD
256FSK
L IN
R IN
INIT AD
IC122
B-REG
256FS
512FS
DIN ERR
Q130
2SA1344
IC331 INITIALIZE
IC123
IC123
CXD2905Q
(DIO)
DATA I/O
CONTROL
DIORDY
DEVCLK
DEVDATA
DIOIFST
DIOIFINI
EMPH
COOPT
DATOPT
CD/DAT
Q331
Q332
IC392
IC121
FS48
FS32
X100
49.152MHZ
IC391
IC112
IC112
CXD1160AQ
(DPAC)
DIGITAL EFFECT
PROCESSOR
DEVDATA
DEVCLK
DPAC LT
2701LT
INITEQ/D
LRCK2
BCK2
DATA2
IC121 AMP
IC392
PHASE COMPARATOR
IC391
74HCU04ANS
BUFFER

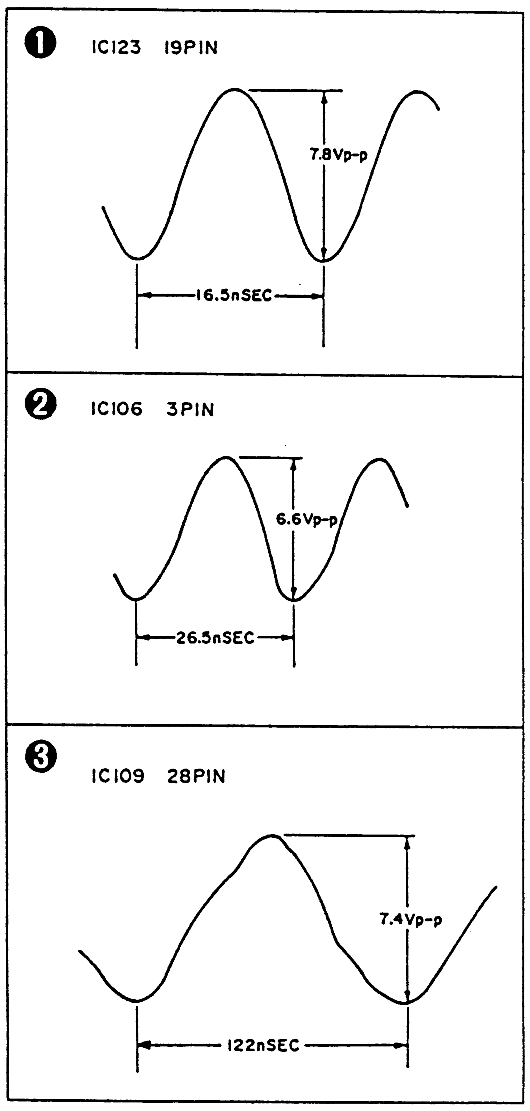
age 29 Schematic Diagram Note.


10
11
12
13
14
15
16
17
18
19
20
21
22
TO FLD BOARD CNJ103
F (See page 30)
CNP102 TO CN-A
TO JACK BOARD CNJ3
E (See page 30)
CNP101 TO JACK
CNP104 TO POWER
TO POWER AMP BOARD CN801
D (See page 30)
IC333 DIGITAL OUT BUFFER
IC333 TC7508F
IC117 2CH HPF
IC119 (R+L CH)AMP
IC118 HPF
IC120 LPF
Q112, Q120, Q121, Q124, Q128, Q129 MUTING SWITCH
IC116 2CH BUFFER
Q113, 113 MUTING SWITCH
IC103 HPF·FC SELECT
IC103 LC7822
IC124 MASTER CLOCK GENERATOR
IC101 2CH VOLTAGE CONTROL AMP
IC101 M5283P
IC332 PROGRMMABLE BPF & ATT
IC332 CXD2560M
Q106 – Q108, Q111 SWITCHING
Q110, Q112 Q125 – Q127 SWITCHING
IC121 TL082M-T1
IC113 M5218AFP
IC106 CXD8245M
C106 CONVERTER
IC108 CXD2557M
IC108 2CH SOUND DETECT
IC109 M37450 DEVICE CONTROLLER
Q109 AU BUS BUFFER
IC110 DRAM
IC110 MSM41464-10RS
IC111 CXD2701Q (DPS+EQ) 2CH DPS EQ DIGITAL CONTROL
IC115 M5218AFP
IC116 M5218AFP
IC117 M5218AFP
IC118 M5218AFP
IC119 M5218AFP
IC120 M5218AFP
+5VA
AGND
+5VD
DGND
-12V
+12V
LRCK1
BCK1
DATA1
LRCK2
DATA2
LRCK3 3
BCK3 2
DATA3 1
NO SIGL
NO SIGR
CD OFF
DEV DATA
DEV CLK
2701LT
FS48
FS32

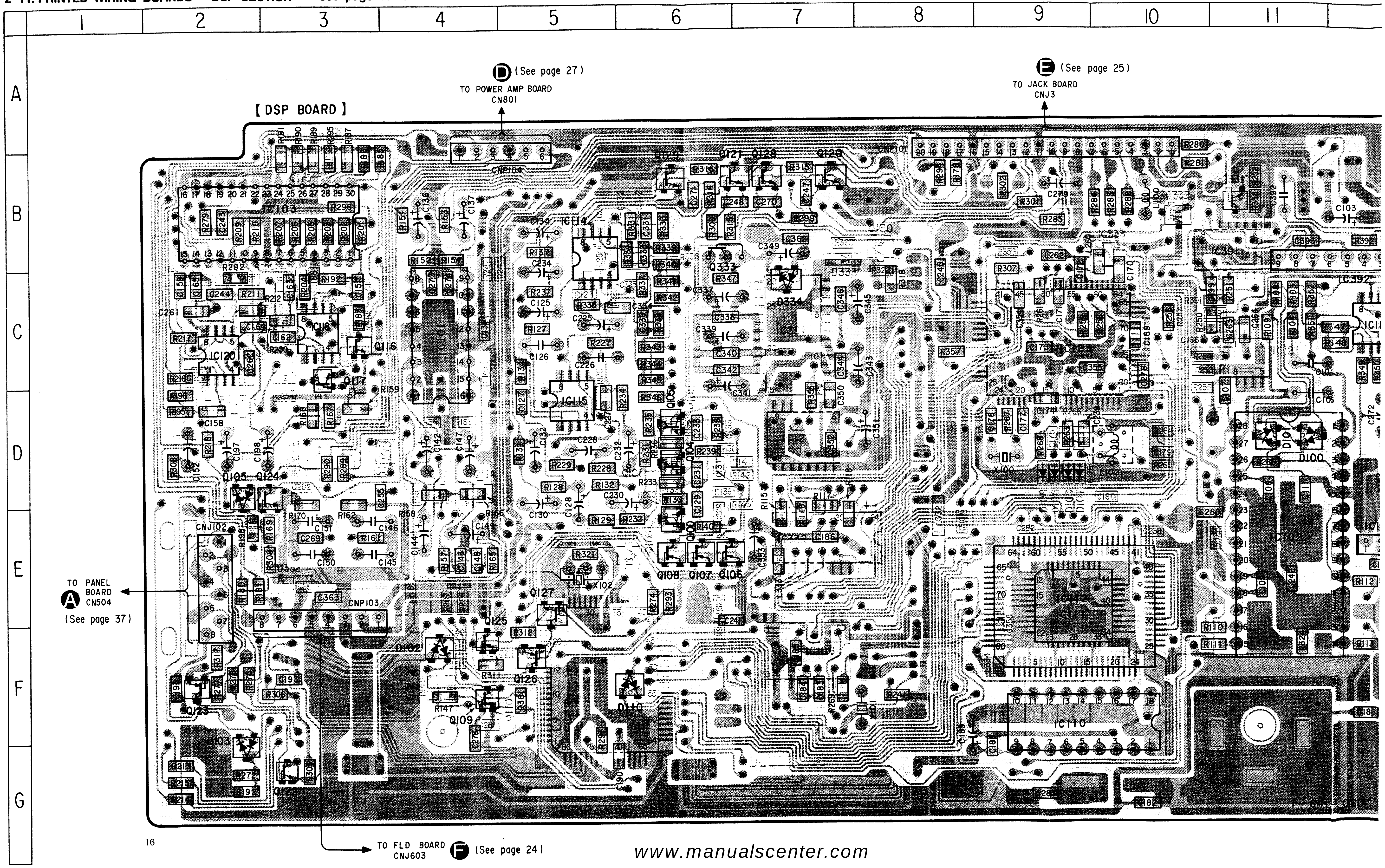
18 to 20 for IC Block Diagrams. See page 29 Schematic Diagram Note.


8
9
10
11
12
13
14
15
16
17
18
TO JACK BOARD CNJ3
E (See page 30)
TO FLD BOARD CNJ103
F (See page 30)
CNP102 TO CN-A
CNP101 TO JACK
IC333 DIGITAL OUT BUFFER
IC117 2CH HPF
IC119 (R+L CH)AMP
Q100 — Q105 — GAIN SELECT SWITCH —
IC114 LPF
IC115 2CH-FILTER AMP
Q112, Q120, Q121, Q124, Q128, Q129 — MUTING SWITCH —
IC116 2CH BUFFER
Q113, 113 MUTING SWITCH
IC124 MASTER CLOCK GENERATOR
IC101 2CH VOLTAGE CONTROL AMP
Q106 — Q108, Q111 — SWITCHING —
IC332 PROGRMMABLE BPF & ATT
Q110, Q112 Q125 — Q127 — SWITCHING
IC106 FORMAT CONVERTER
IC109 M37450 DEVICE CONTROLLER
Q109 AU BUS BUFFER
IC108 2CH SOUND DETECT
IC110 DRAM
IC111 CXD2701Q (DPS+EQ) 2CH DPS EQ DIGITAL CONTROL
IC115 M5218AFP
IC116 M5218AFP
IC117 M5218AFP
IC118 M5218AFP
IC119 M5218AFP
IC120 M5218AFP
1
2
3
+12V
-12V


20
21
22
23
24
25
26
27
CNP104
TO POWER
TO POWER AMP BOARD
CN801
D
(See page 30)
GND
LLOW
RLOW
GND
RHIGH
LHIGH
IC118
HPF
IC118 (1/2)
M5218AFP
IC120
LPF
+12V
IC120 (1/2)
M5218AFP
IC103
HPF·FC
SELECT
VDD
RES
VSS
VEE
CE
DATA
CLK
ØB RES
ØB CLK
ØB DATA
ØB CE
RESET DRV
Q115
2SC3398-TB
IC120 (2/2)
M5218AFP
IC118 (2/2)
M5218AFP
Q110
2SA1344-TB
Q122
2SC4154TP-1EF
AFTER VCA MUTE
+12V
IC121
TL082M-T1
IC113
M5218AFP
IC114
M5218AFP
AGND
-12V
Q127
2SC3398-TB
D103
BCC018-TB
CD OFF
Q118
2SC3398-TB
Q123
SUPER WOOFER
SWITCHING
Q123
2SA1344-TB
CNJ102
TO PANEL
+5.6V
FROM MAIN
TO MAIN
SPER
SPEL
RESET
S.MUTE
GND
DGND
TO PANEL BOARD
CN504
A
(See page 34)
+12V
AGND
-12V


❶ IC123 19PIN
7.8Vp-p
16.5nSEC
❷ IC106 3PIN
6.6Vp-p
26.5nSEC
❸ IC109 28PIN
7.4Vp-p
122nSEC

2-11. PRINTED WIRING BOARDS – DSP SECTION – • See page 16 to 17 for Circuit Boards Location and Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
D (See page 27)
TO POWER AMP BOARD
CN801
E (See page 25)
TO JACK BOARD
CNJ3
[DSP BOARD]
CNP104
CNP101
IC103
IC101
IC104
IC115
IC118
IC120
IC110
IC111
IC112
IC102
CNJ102
CNP103
TO PANEL BOARD CN504
A (See page 37)
16
TO FLD BOARD
CNJ603
F (See page 24)

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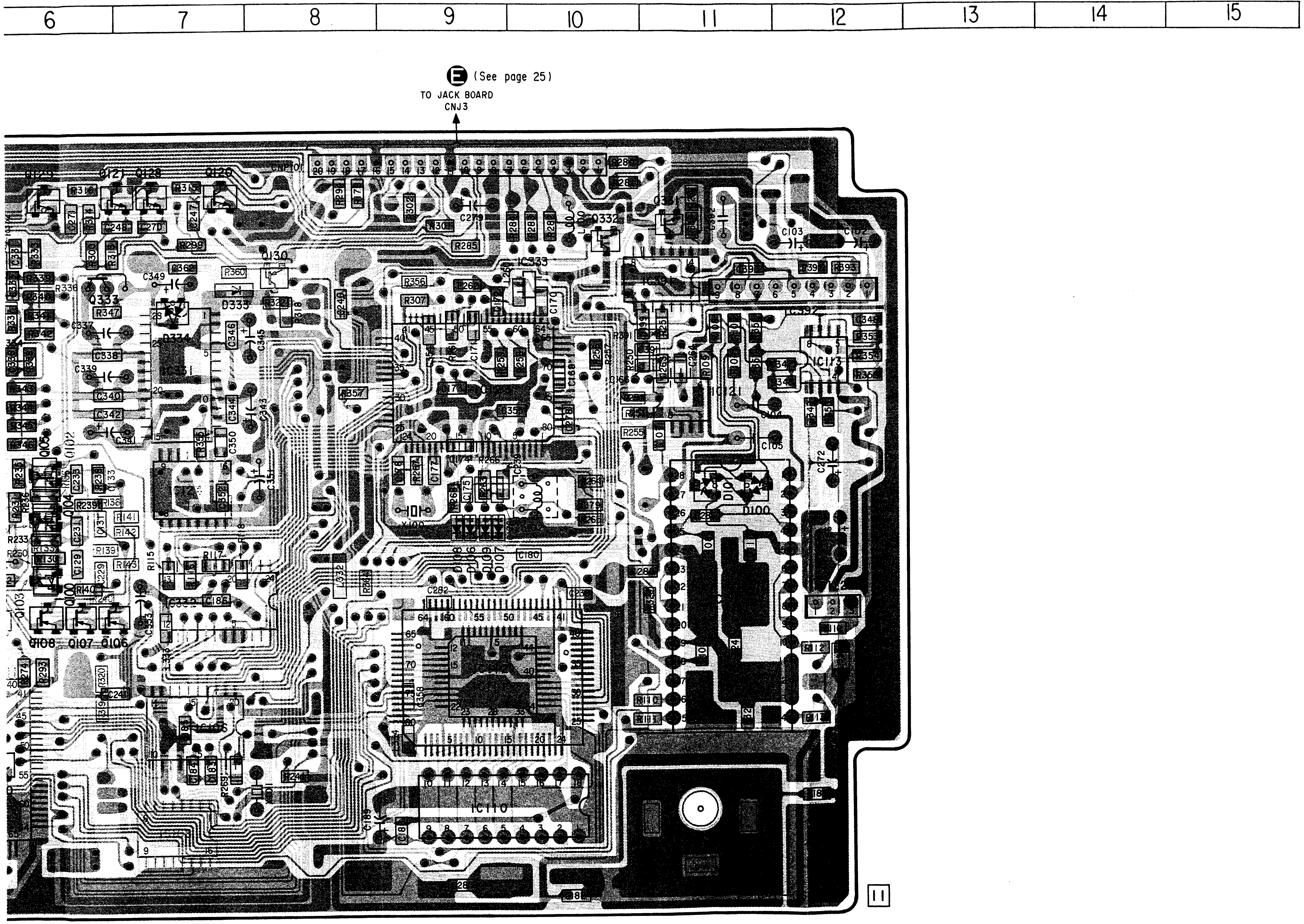
emiconductor Lead Layouts.


6
7
8
9
10
11
12
13
14
15
E (See page 25)
TO JACK BOARD
CNJ3
CNP101
Q129
Q121
Q128
Q120
Q130
Q332
Q333
D333
D334
IC331
IC333
IC391
IC392
IC113
IC121
IC332
IC105
IC110
D100
D101
D106
D108
D109
D107
X100
C103
C102
C105
C272
Q104
Q108
Q107
Q106
Q100
Q103
Q105
Q102
11

· Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D100	D-11	Q125	F-4
D101	D-11	Q126	F-5
D102	F-4	Q127	E-5
D103	G-2	Q128	B-7
D104	D-4	Q129	B-6
D105	D-2	Q130	B-8
D106	D-9	Q331	B-11
D107	D-9	Q332	B-10
D108	D-9	Q333	B-6
D109	D-9		
D110	F-6		
D332	E-3		
D333	B-7		
D334	C-7		
IC101	C-4		
IC102	E-11		
IC103	B-3		
IC106	F-7		
IC108	G-7		
IC109	F-5		
IC110	F-9		
IC111	F-9		
IC112	E-9		
IC113	C-12		
IC114	B-5		
IC115	D-5		
IC116	D-3		
IC117	D-3		
IC118	C-3		
IC119	C-2		
IC120	C-2		
IC121	C-11		
IC122	E-12		
IC123	C-9		
IC124	D-7		
IC331	C-7		
IC332	E-7		
IC333	B-10		
IC391	B-11		
IC392	B-12		
Q100	E-6		
Q101	D-6		
Q102	D-6		
Q103	E-6		
Q104	D-6		
Q105	D-6		
Q106	E-6		
Q107	E-6		
Q108	E-6		
Q109	F-4		
Q110	F-4		
Q111	F-4		
Q112	D-2		
Q113	D-4		
Q114	D-4		
Q115	B-3		
Q116	C-3		
Q117	C-3		
Q118	E-6		
Q120	B-7		
Q121	B-7		
Q122	G-3		
Q123	F-2		
Q124	D-3		

Note on Mounting Diagram :

- ○—— : Parts extracted from the component side.
- ● : Through hole.
- ▓ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

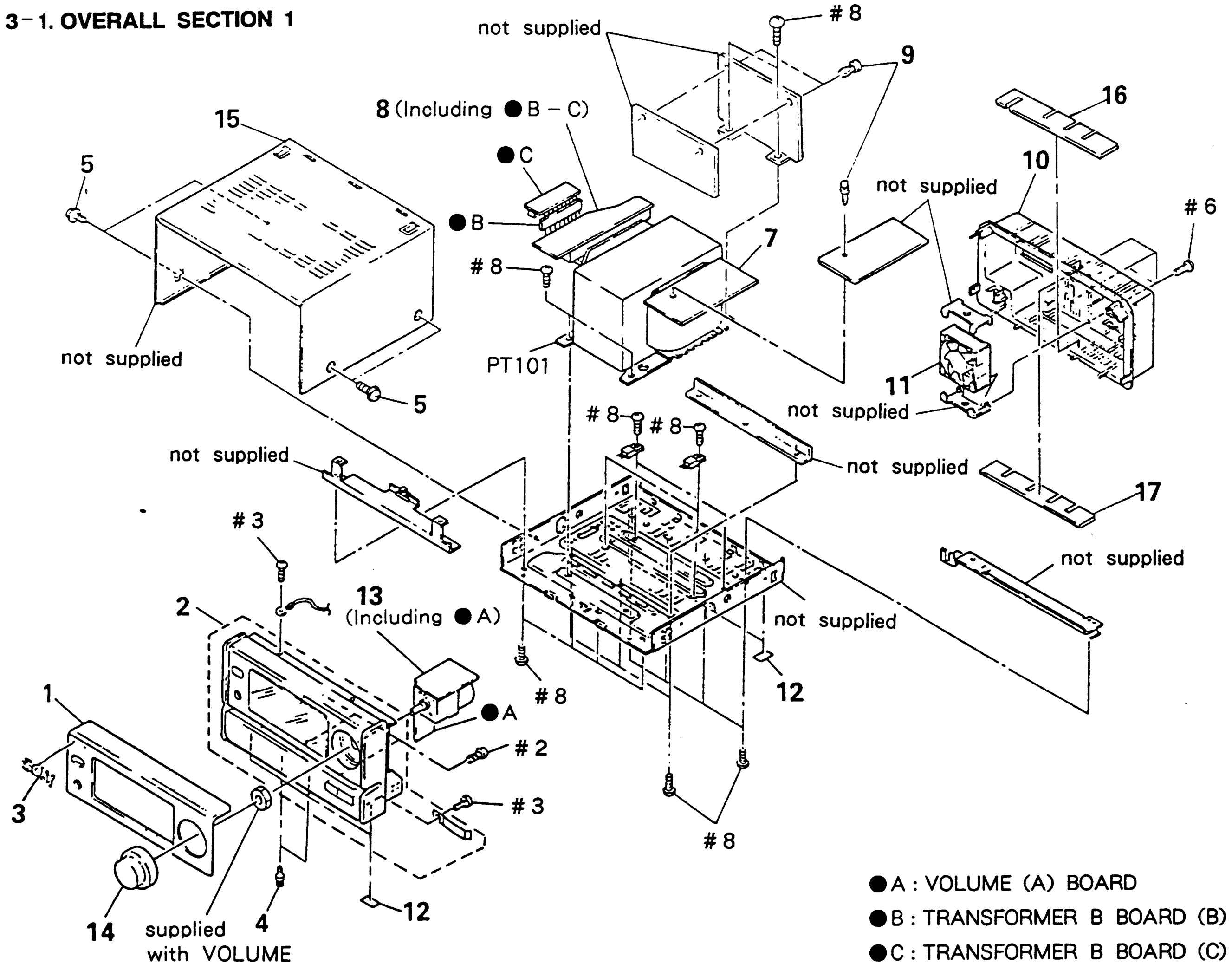
SECTION 3
EXPLODED VIEWS

NOTE :
- - XX, - X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- G : Germany model
  IT : Itallian model

3-1. OVERALL SECTION 1



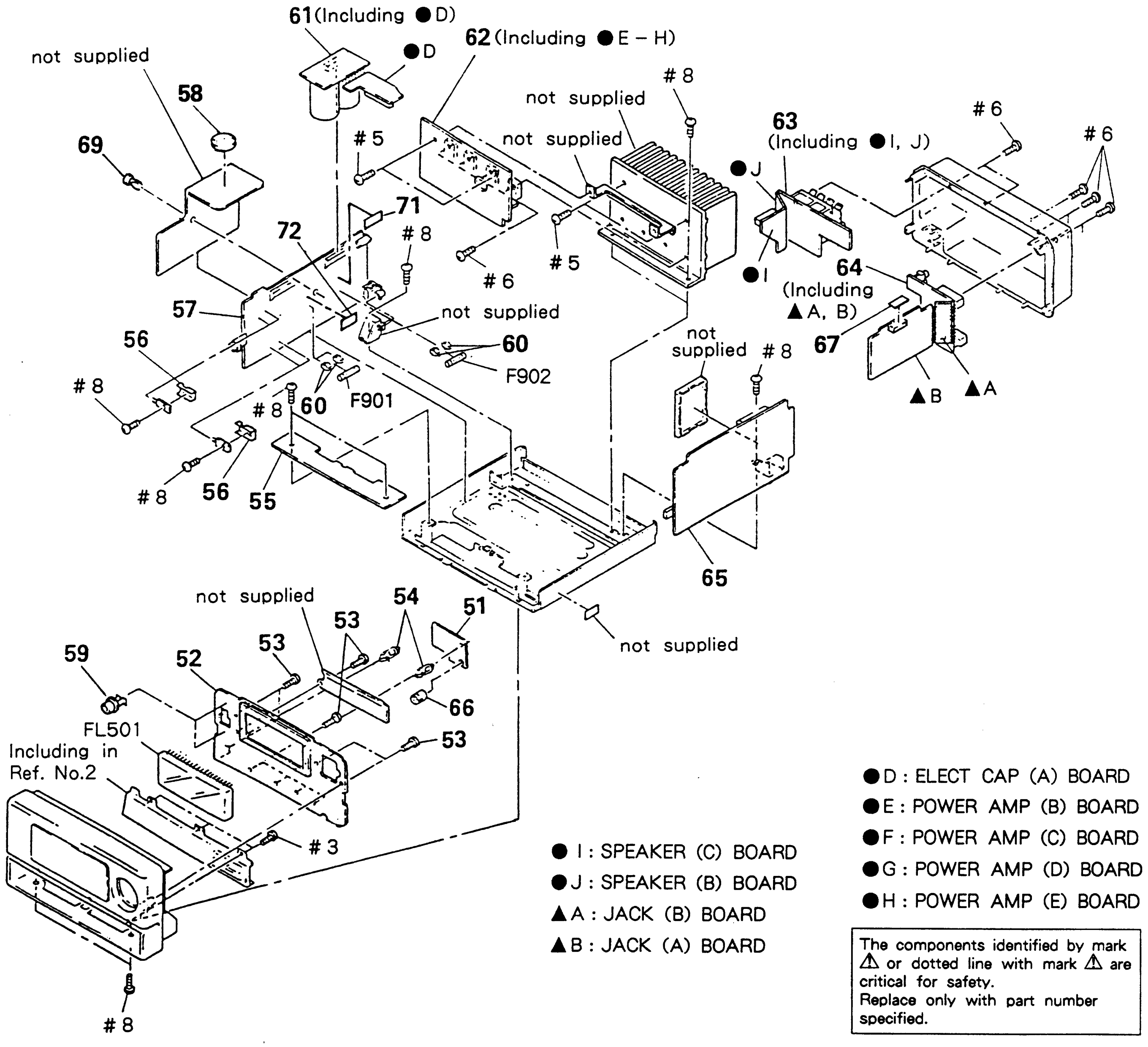
not supplied
#8
9
16
15
8 (Including ●B – C)
●C
5
●B
#8
7
not supplied
10
#6
not supplied
PT101
5
11
not supplied
#8
#8
not supplied
17
not supplied
#3
not supplied
2
13 (Including ●A)
not supplied
1
#8
●A
12
#2
3
#3
#8
14
supplied with VOLUME
4
12

●A : VOLUME (A) BOARD
●B : TRANSFORMER B BOARD (B)
●C : TRANSFORMER B BOARD (C)

Ref. No.	Part No.	Description	Remarks
1	X-4941-948-1	PANEL ASSY, FRONT	
2	X-4941-537-1	PANEL (BASE) ASSY (H5600)	
	X-4941-539-1	PANEL (BASE) ASSY (H6600)	
3	4-942-636-01	EMBLEM (NO.3.5), SONY	
4	4-812-134-00	RIVET NYLON, 3.5	
5	3-363-099-01	SCREW (CASE +3X8 TP2)	
7	* 1-638-911-13	TRANSFORMER (A) BOARD	
8	* 1-638-912-12	TRANSFORMER (B) BOARD	
9	4-812-134-11	RIVET NYLON, 3.5	
10	4-943-336-41	PANEL, BACK	

Ref. No.	Part No.	Description	Remarks
11	1-541-860-11	MOTOR, DC FAN	
12	4-930-336-01	FOOT (FELT)	
13	* 1-638-906-12	VOLUME BOARD	
14	X-4941-532-1	KNOB (VOLUME) ASSY	
15	* 4-932-841-41	CASE	
16	4-947-205-01	PLATE (A), ORNAMENTAL	
17	4-947-206-01	PLATE (B), ORNAMENTAL	
PT101	⚠1-450-355-11	TRANSFORMER, POWER (UK)	
	⚠1-450-356-11	TRANSFORMER, POWER (AEP, G, IT)	

3-2. OVERALL SECTION 2



61 (Including ●D)
●D
62 (Including ●E – H)
not supplied
#8
not supplied
58
#6
69
#5
not supplied
63 (Including ●I, J)
#6
●J
71
72
#8
#5
#6
●I
64 (Including ▲A, B)
57
not supplied
56
60
F902
not supplied
#8
67
#8
#8
60
F901
▲B
▲A
#8
56
55
65
not supplied
54
53
51
59
52
53
not supplied
66
FL501 Including in Ref. No.2
53
#3
#8

●D : ELECT CAP (A) BOARD
●E : POWER AMP (B) BOARD
●F : POWER AMP (C) BOARD
●G : POWER AMP (D) BOARD
●H : POWER AMP (E) BOARD

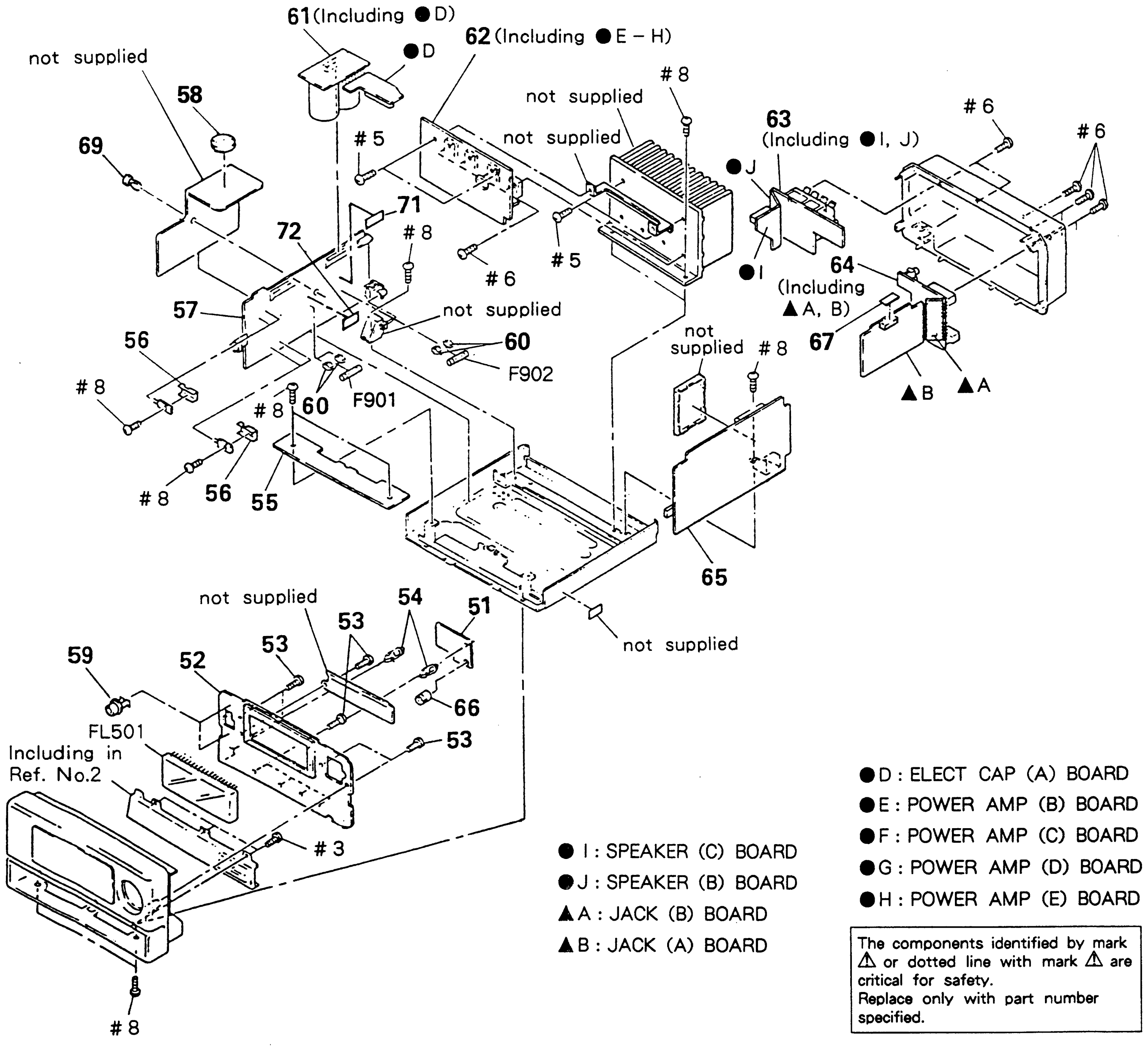
●I : SPEAKER (C) BOARD
●J : SPEAKER (B) BOARD
▲A : JACK (B) BOARD
▲B : JACK (A) BOARD

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
51	* 1-638-909-12	CONNECTOR BOARD	
52	* A-4341-606-A	PANEL BOARD, COMPLETE (H6600)	
	* A-4345-734-A	PANEL BOARD, COMPLETE (H5600)	
53	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
54	* 3-682-419-71	HOLDER, PCB	
55	* A-4341-598-A	FLD BOARD, COMPLETE	
56	* 3-309-144-21	HEAT SINK	
57	* A-4341-619-A	POWER SUPPLY BOARD, COMPLETE (AEP,UK)	
	* A-4341-623-A	POWER SUPPLY BOARD, COMPLETE (G, IT)	
58	* 4-932-810-11	CUSHION (FL)	
59	* 3-362-478-21	HOLDER (T), LED	
60	1-533-213-31	HOLDER, FUSE	
61	* 1-638-910-12	ELECT CAP BOARD	

Ref. No.	Part No.	Description	Remarks
62	* A-4341-620-A	POWER AMP BOARD, COMPLETE (AEP, UK)	
62	* A-4341-624-A	POWER AMP BOARD, COMPLETE (G, IT)	
63	* 1-638-907-12	SPEAKER BOARD	
64	* 1-638-904-12	JACK BOARD	
65	* A-4341-586-A	DSP BOARD, COMPLETE	
66	* 4-886-873-00	SPACER	
67	4-860-518-00	CUSHION	
69	4-812-134-11	RIBET NYLON, 3.5	
70	* 3-561-427-21	CUSHION	
72	3-701-947-15	LABEL (T2.5A), FUSE	
F901	⚠1-532-286-00	FUSE (T2.5A)	
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	

3-2. OVERALL SECTION 2



- ● D : ELECT CAP (A) BOARD
- ● E : POWER AMP (B) BOARD
- ● F : POWER AMP (C) BOARD
- ● G : POWER AMP (D) BOARD
- ● H : POWER AMP (E) BOARD
- ● I : SPEAKER (C) BOARD
- ● J : SPEAKER (B) BOARD
- ▲ A : JACK (B) BOARD
- ▲ B : JACK (A) BOARD

> The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
> Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
51	∗ 1-638-909-12	CONNECTOR BOARD	
52	∗ A-4341-606-A	PANEL BOARD, COMPLETE (H6600)	
	∗ A-4345-734-A	PANEL BOARD, COMPLETE (H5600)	
53	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
54	∗ 3-682-419-71	HOLDER, PCB	
55	∗ A-4341-598-A	FLD BOARD, COMPLETE	
56	∗ 3-309-144-21	HEAT SINK	
57	∗ A-4341-619-A	POWER SUPPLY BOARD, COMPLETE (AEP, UK)	
	∗ A-4341-623-A	POWER SUPPLY BOARD, COMPLETE (G, IT)	
58	∗ 4-932-810-11	CUSHION (FL)	
59	∗ 3-362-478-21	HOLDER (T), LED	
60	1-533-213-31	HOLDER, FUSE	
61	∗ 1-638-910-12	ELECT CAP BOARD	

Ref. No.	Part No.	Description	Remarks
62	∗ A-4341-620-A	POWER AMP BOARD, COMPLETE (AEP, UK)	
62	∗ A-4341-624-A	POWER AMP BOARD, COMPLETE (G, IT)	
63	∗ 1-638-907-12	SPEAKER BOARD	
64	∗ 1-638-904-12	JACK BOARD	
65	∗ A-4341-586-A	DSP BOARD, COMPLETE	
66	∗ 4-886-873-00	SPACER	
67	4-860-518-00	CUSHION	
69	4-812-134-11	RIBET NYLON, 3.5	
70	∗ 3-561-427-21	CUSHION	
72	3-701-947-15	LABEL (T2.5A), FUSE	
F901	⚠1-532-286-00	FUSE (T2.5A)	
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	

SECTION 4
ELECTRICAL PARTS LIST

PANEL **DSP**

NOTE:

> The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
> Replace only with part number specified.

> When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- −XX, −X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... ,
  uPB... , μPB... , uPC... , μPC... ,
  uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	∗ A-4341-606-A	PANEL BOARD, COMPLETE (H6600)				
	∗ A-4345-734-A	PANEL BOARD, COMPLETE (H5600)				
		∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗				
	∗ A-4341-586-A	DSP BOARD, COMPLETE				
		∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗∗				
	∗ 3-362-478-21	HOLDER (T), LED				
		< CAPACITOR >				
C102	1-124-589-11	ELECT	47uF	20%	16V	
C103	1-124-589-11	ELECT	47uF	20%	16V	
C104	1-136-153-00	FILM	0.01uF	5%	50V	
C105	1-136-153-00	FILM	0.01uF	5%	50V	
C106	1-124-589-11	ELECT	47uF	20%	16V	
C107	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C109	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C110	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C111	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C125	1-124-915-11	ELECT	10uF	20%	63V	
C126	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C127	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C128	1-124-915-11	ELECT	10uF	20%	63V	
C129	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C130	1-124-915-11	ELECT	10uF	20%	63V	
C131	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C132	1-124-915-11	ELECT	10uF	20%	63V	
C133	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C134	1-124-910-11	ELECT	47uF	20%	50V	
C136	1-124-910-11	ELECT	47uF	20%	50V	
C137	1-124-910-11	ELECT	47uF	20%	50V	
C138	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C139	1-164-346-11	CERAMIC CHIP	1uF		16V	
C140	1-164-346-11	CERAMIC CHIP	1uF		16V	

Ref. No.	Part No.	Description				Remarks
C141	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C142	1-124-915-11	ELECT	10uF	20%	63V	
C143	1-164-346-11	CERAMIC CHIP	1uF		16V	
C144	1-124-910-11	ELECT	47uF	20%	50V	
C145	1-136-165-00	FILM	0.1uF	5%	50V	
C146	1-136-159-00	FILM	0.033uF	5%	50V	
C147	1-124-915-11	ELECT	10uF	20%	63V	
C148	1-164-346-11	CERAMIC CHIP	1uF		16V	
C149	1-124-910-11	ELECT	47uF	20%	50V	
C150	1-136-165-00	FILM	0.1uF	5%	50V	
C151	1-136-159-00	FILM	0.033uF	5%	50V	
C152	1-124-910-11	ELECT	47uF	20%	50V	
C153	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C154	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C155	1-164-346-11	CERAMIC CHIP	1uF		16V	
C156	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C157	1-164-346-11	CERAMIC CHIP	1uF		16V	
C158	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C159	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C160	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C161	1-164-346-11	CERAMIC CHIP	1uF		16V	
C162	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C163	1-164-346-11	CERAMIC CHIP	1uF		16V	
C164	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C165	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C166	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C169	1-164-346-11	CERAMIC CHIP	1uF		16V	
C170	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C171	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	
C172	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C173	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C174	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C175	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C176	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C177	1-163-222-91	CERAMIC CHIP	5PF	0.25PF	50V	

PANEL **DSP**

Ref. No.	Part No.	Description			Remarks
C178	1-163-222-91	CERAMIC CHIP	5PF	0.25PF	50V
C179	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C180	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C183	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C184	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C185	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C186	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C188	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C189	1-124-589-11	ELECT	47uF	20%	16V
C190	1-164-346-11	CERAMIC CHIP	1uF		16V
C192	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C193	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C195	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C196	1-124-589-11	ELECT	47uF	20%	16V
C197	1-124-910-11	ELECT	47uF	20%	50V
C198	1-124-910-11	ELECT	47uF	20%	50V
C199	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C201	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C202	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C225	1-124-915-11	ELECT	10uF	20%	63V
C226	1-130-475-00	MYLAR	0.0022uF	5%	50V
C227	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C228	1-124-915-11	ELECT	10uF	20%	63V
C229	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C230	1-124-915-11	ELECT	10uF	20%	63V
C231	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C232	1-124-915-11	ELECT	10uF	20%	63V
C233	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C234	1-124-910-11	ELECT	47uF	20%	50V
C238	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C239	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C240	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C241	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C242	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C243	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C244	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C245	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C246	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C247	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C248	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C249	1-164-346-11	CERAMIC CHIP	1uF		16V
C250	1-164-346-11	CERAMIC CHIP	1uF		16V
C253	1-164-346-11	CERAMIC CHIP	1uF		16V
C254	1-164-346-11	CERAMIC CHIP	1uF		16V
C255	1-164-346-11	CERAMIC CHIP	1uF		16V
C256	1-164-346-11	CERAMIC CHIP	1uF		16V
C257	1-164-346-11	CERAMIC CHIP	1uF		16V
C258	1-164-346-11	CERAMIC CHIP	1uF		16V
C259	1-164-346-11	CERAMIC CHIP	1uF		16V
C260	1-164-346-11	CERAMIC CHIP	1uF		16V
C261	1-164-346-11	CERAMIC CHIP	1uF		16V
C262	1-164-346-11	CERAMIC CHIP	1uF		16V
C263	1-164-346-11	CERAMIC CHIP	1uF		16V
C264	1-164-346-11	CERAMIC CHIP	1uF		16V
C269	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C270	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C271	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C272	1-124-589-11	ELECT	47uF	20%	16V
C273	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C274	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C275	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C276	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C279	1-126-163-11	ELECT	4.7uF	20%	50V
C280	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C282	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C283	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C331	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C332	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C333	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C334	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C335	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C336	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C337	1-124-229-00	ELECT	33uF	20%	10V
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C339	1-124-229-00	ELECT	33uF	20%	10V
C340	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C341	1-124-229-00	ELECT	33uF	20%	10V
C342	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C343	1-124-229-00	ELECT	33uF	20%	10V
C344	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C345	1-124-229-00	ELECT	33uF	20%	10V
C346	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C347	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C348	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C349	1-126-157-11	ELECT	10uF	20%	16V
C350	1-163-222-91	CERAMIC CHIP	5PF	0.25PF	50V
C351	1-124-229-00	ELECT	33uF	20%	10V
C352	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C353	1-124-229-00	ELECT	33uF	20%	10V
C355	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

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Ref. No.	Part No.	Description				Remarks
C356	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C357	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C358	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C362	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C363	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C391	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C392	1-136-153-00	FILM	0.01uF	5%	50V	
C393	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C501	1-124-667-11	ELECT	10uF	20%	100V	
C502	1-124-667-11	ELECT	10uF	20%	100V	
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C507	1-124-261-00	ELECT	10uF	20%	50V	
C508	1-124-589-11	ELECT	47uF	20%	16V	
C509	1-126-163-11	ELECT	4.7uF	20%	50V	
C510	1-126-301-11	ELECT	1uF	20%	50V	
C511	1-126-163-11	ELECT	4.7uF	20%	50V	
C513	1-163-124-00	CERAMIC CHIP	200PF	5%	50V	
C521	1-124-589-11	ELECT	47uF	20%	16V	
C522	1-124-589-11	ELECT	47uF	20%	16V	
C523	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	
C524	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	
C525	1-126-176-11	ELECT	220uF	20%	10V	
C526	1-124-261-00	ELECT	10uF	20%	50V	
C527	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C528	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C529	1-124-234-00	ELECT	22uF	20%	16V	
C530	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C531	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	

< CONNECTOR >

Ref. No.		Part No.	Description
CN501	*	1-568-318-11	PLUG, CONNECTOR 6P
CN502	*	1-568-320-11	PLUG, CONNECTOR 8P
CN503		1-561-115-00	SOCKET, CONNECTOR 6P
CN504	*	1-568-320-11	PLUG, CONNECTOR 8P
CNJ102		1-568-319-11	SOCKET, CONNECTOR 8P
CNP101	*	1-566-154-11	CONNECTOR, BOARD TO BOARD 20P
CNP103		1-573-146-11	PLUG, CONNECTOR 8P
CNP104	*	1-564-509-11	PLUG, CONNECTOR 6P

< DIODE >

Ref. No.	Part No.	Description		Remarks
D100	8-719-800-76	DIODE	1SS226	
D101	8-719-800-76	DIODE	1SS226	
D102	8-719-990-39	DIODE	DCB010	
D103	8-719-800-76	DIODE	1SS226	
D104	8-719-800-76	DIODE	1SS226	
D105	8-719-800-76	DIODE	1SS226	
D106	8-719-002-81	DIODE	1T363	
D107	8-719-002-81	DIODE	1T363	
D108	8-719-002-81	DIODE	1T363	
D109	8-719-002-81	DIODE	1T363	
D110	8-719-990-39	DIODE	DCB010	
D332	8-719-800-76	DIODE	1SS226	
D333	8-719-210-39	DIODE	EC10QS-04	
D334	8-719-106-08	DIODE	RD6.2M-B2	
D501	8-719-977-03	DIODE	DTZ5.6B	
D502	8-719-990-39	DIODE	DCB010	
D503	8-719-990-39	DIODE	DCB010	
D504	8-719-301-39	LED	SEL2210S-D	
D505	8-719-301-39	LED	SEL2210S-D	
D506	8-719-301-39	LED	SEL2210S-D	
D507	8-719-301-39	LED	SEL2210S-D	
D508	8-719-301-39	LED	SEL2210S-D	
D509	8-719-301-39	LED	SEL2210S-D	
D510	8-719-301-39	LED	SEL2210S-D	
D511	8-719-301-39	LED	SEL2210S-D	
D512	8-719-301-39	LED	SEL2210S-D	
D514	8-719-301-44	LED	SEL2410E-D	
D515	8-719-301-44	LED	SEL2410E-D	
D521	8-719-977-04	DIODE	DTZ5.6C	
D522	8-719-977-04	DIODE	DTZ5.6C	
D523	8-719-990-39	DIODE	DCB010	

< INDICATOR TUBE >

Ref. No.	Part No.	Description
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT

< IC >

Ref. No.	Part No.	Description	
IC101	8-759-635-26	IC	M5283P
IC102	8-759-504-36	IC	AK5339-KP
IC103	8-759-805-14	IC	LC7822
IC106	8-759-511-68	IC	CXD8245M
IC108	8-752-339-86	IC	CXD2557M
IC109	8-759-041-72	IC	M37450M8-464FP
IC110	8-759-973-04	IC	MSM41464-10RS-K
IC111	8-752-341-99	IC	CXD2701Q
IC112	8-752-332-80	IC	CXD1160AQ
IC113	8-759-636-55	IC	M5218AFP

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Ref. No.	Part No.	Description	Remarks
IC114	8-759-636-55	IC M5218AFP	
IC115	8-759-636-55	IC M5218AFP	
IC116	8-759-636-55	IC M5218AFP	
IC117	8-759-636-55	IC M5218AFP	
IC118	8-759-636-55	IC M5218AFP	
IC119	8-759-636-55	IC M5218AFP	
IC120	8-759-636-55	IC M5218AFP	
IC121	8-759-908-17	IC TL082CPS	
IC122	8-759-982-44	IC RC79L05A	
IC123	8-759-512-96	IC CXD2905Q	
IC124	8-759-517-14	IC MB625473PF-G	
IC331	8-752-344-10	IC CXD2561M-1	
IC332	8-752-342-65	IC CXD2560M	
IC333	8-759-234-20	IC TC7S08F	
IC391	8-759-927-29	IC SN74HCU04ANS	
IC392	8-759-250-81	IC TC5081AP	
IC501	8-759-512-46	IC MSC7162	
IC502	8-759-512-45	IC SN755731	
IC503	8-759-512-45	IC SN755731	
IC504	8-759-512-46	IC MSC7162	
IC505	8-759-512-47	IC SN755721	
IC506	8-759-246-46	IC TMP91C640F-2302	
IC507	8-759-605-16	IC M51953BL	
IC508	8-759-039-78	IC MC68HC11E9SC400366FU	
IC509	8-759-512-48	IC XR-1092	

< COIL >

Ref. No.	Part No.	Description	Remarks
L100	1-410-397-21	FERRITE BEAD INDUCTOR (1.1uH)	
L102	1-406-416-11	COIL (OSC) (0.6uH)	
L260	1-412-390-21	INDUCTOR, CHIP 0uH	
L262	1-412-390-21	INDUCTOR, CHIP 0uH	
L331	1-410-381-11	INDUCTOR CHIP 10uH	
L332	1-543-610-11	BEAD, FERRITE	
L333	1-412-390-21	INDUCTOR, CHIP 0uH	
L334	1-412-390-21	INDUCTOR, CHIP 0uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remarks
Q100	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q101	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q102	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q103	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q104	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q105	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q106	8-729-805-65	TRANSISTOR 2SA1344	
Q107	8-729-805-65	TRANSISTOR 2SA1344	
Q108	8-729-805-65	TRANSISTOR 2SA1344	
Q109	8-729-602-21	TRANSISTOR 2SC4154-F	
Q110	8-729-805-65	TRANSISTOR 2SA1344	
Q111	8-729-805-65	TRANSISTOR 2SA1344	
Q112	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q113	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q114	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q115	8-729-805-41	TRANSISTOR 2SC3398	
Q116	8-729-602-21	TRANSISTOR 2SC4154-F	
Q117	8-729-602-21	TRANSISTOR 2SC4154-F	
Q118	8-729-805-41	TRANSISTOR 2SC3398	
Q120	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q121	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q122	8-729-602-21	TRANSISTOR 2SC4154-F	
Q123	8-729-805-65	TRANSISTOR 2SA1344	
Q124	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q125	8-729-602-36	TRANSISTOR 2SA1602-F	
Q126	8-729-805-65	TRANSISTOR 2SA1344	
Q127	8-729-805-41	TRANSISTOR 2SC3398	
Q128	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q129	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q130	8-729-805-65	TRANSISTOR 2SA1344	
Q331	8-729-805-41	TRANSISTOR 2SC3398	
Q332	8-729-805-65	TRANSISTOR 2SA1344	
Q333	8-729-205-97	TRANSISTOR 2SC3668-Y	
Q501	8-729-602-36	TRANSISTOR 2SA1602-F	
Q502	8-729-602-21	TRANSISTOR 2SC4154-F	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-805-65	TRANSISTOR 2SA1344	
Q505	8-729-602-36	TRANSISTOR 2SA1602-F	
Q506	8-729-805-41	TRANSISTOR 2SC3398	
Q507	8-729-602-21	TRANSISTOR 2SC4154-F	
Q508	8-729-602-21	TRANSISTOR 2SC4154-F	
Q509	8-729-602-21	TRANSISTOR 2SC4154-F	
Q510	8-729-602-21	TRANSISTOR 2SC4154-F	
Q511	8-729-602-21	TRANSISTOR 2SC4154-F	
Q512	8-729-602-21	TRANSISTOR 2SC4154-F	
Q513	8-729-602-21	TRANSISTOR 2SC4154-F	
Q514	8-729-602-21	TRANSISTOR 2SC4154-F	
Q515	8-729-602-21	TRANSISTOR 2SC4154-F	
Q516	8-729-602-21	TRANSISTOR 2SC4154-F	
Q517	8-729-602-21	TRANSISTOR 2SC4154-F	

PANEL **DSP**

< RESISTOR >

Ref. No.	Part No.	Description	Remarks
R103	1-216-025-00	METAL CHIP 100 5% 1/10W	
R104	1-216-025-00	METAL CHIP 100 5% 1/10W	
R108	1-216-025-00	METAL CHIP 100 5% 1/10W	
R109	1-216-025-00	METAL CHIP 100 5% 1/10W	
R110	1-216-041-00	METAL CHIP 470 5% 1/10W	
R111	1-216-041-00	METAL CHIP 470 5% 1/10W	
R112	1-216-041-00	METAL CHIP 470 5% 1/10W	
R113	1-216-041-00	METAL CHIP 470 5% 1/10W	
R115	1-216-041-00	METAL CHIP 470 5% 1/10W	
R116	1-216-041-00	METAL CHIP 470 5% 1/10W	
R117	1-216-041-00	METAL CHIP 470 5% 1/10W	
R118	1-216-041-00	METAL CHIP 470 5% 1/10W	
R126	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R127	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R128	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R129	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R130	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R131	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R132	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R133	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R134	1-216-043-00	METAL CHIP 560 5% 1/10W	
R135	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R136	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R137	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R138	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R139	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R140	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R141	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R142	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R143	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R146	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R147	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R148	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R149	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R150	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R151	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R152	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R153	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R154	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R155	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R156	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R157	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R158	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R159	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R160	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R161	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R162	1-216-094-00	METAL GLAZE 75K 5% 1/10W	
R163	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R164	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R165	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R166	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R167	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R168	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R169	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R170	1-216-094-00	METAL GLAZE 75K 5% 1/10W	
R171	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R172	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R173	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R174	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R175	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R176	1-216-041-00	METAL CHIP 470 5% 1/10W	
R177	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R178	1-216-025-00	METAL CHIP 100 5% 1/10W	
R179	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R180	1-216-033-00	METAL CHIP 220 5% 1/10W	
R181	1-216-033-00	METAL CHIP 220 5% 1/10W	
R182	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R183	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R184	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R185	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R186	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R187	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R188	1-216-117-00	METAL CHIP 680K 5% 1/10W	
R189	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R190	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R191	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R192	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R193	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R194	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R195	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R196	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R197	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R198	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R199	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R200	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	

PANEL DSP

Ref. No.	Part No.	Description				Remarks
R201	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R202	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R203	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R204	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R205	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R206	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R207	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R208	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R209	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R210	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R211	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R212	1-216-082-00	METAL GLAZE	24K	5%	1/10W	
R213	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R214	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R215	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R216	1-216-033-00	METAL CHIP	220	5%	1/10W	
R217	1-216-033-00	METAL CHIP	220	5%	1/10W	
R218	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R226	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R227	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R228	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R229	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R230	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R231	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R232	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R233	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R234	1-216-043-00	METAL CHIP	560	5%	1/10W	
R235	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R236	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R237	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R238	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R239	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R240	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R242	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R243	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R250	1-216-037-00	METAL CHIP	330	5%	1/10W	
R251	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R252	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R253	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R254	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R255	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R256	1-216-025-00	METAL CHIP	100	5%	1/10W	
R257	1-216-025-00	METAL CHIP	100	5%	1/10W	
R258	1-216-041-00	METAL CHIP	470	5%	1/10W	
R259	1-216-041-00	METAL CHIP	470	5%	1/10W	
R261	1-216-017-00	METAL CHIP	47	5%	1/10W	
R263	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R264	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R265	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R266	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R267	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R268	1-216-025-00	METAL CHIP	100	5%	1/10W	
R269	1-216-025-00	METAL CHIP	100	5%	1/10W	
R272	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R274	1-216-041-00	METAL CHIP	470	5%	1/10W	
R275	1-216-025-00	METAL CHIP	100	5%	1/10W	
R276	1-216-025-00	METAL CHIP	100	5%	1/10W	
R277	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R279	1-216-076-00	METAL GLAZE	13K	5%	1/10W	
R280	1-216-025-00	METAL CHIP	100	5%	1/10W	
R281	1-216-025-00	METAL CHIP	100	5%	1/10W	
R282	1-216-025-00	METAL CHIP	100	5%	1/10W	
R283	1-216-025-00	METAL CHIP	100	5%	1/10W	
R284	1-216-033-00	METAL CHIP	220	5%	1/10W	
R285	1-216-025-00	METAL CHIP	100	5%	1/10W	
R286	1-216-001-00	METAL CHIP	10	5%	1/10W	
R287	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R288	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R289	1-216-033-00	METAL CHIP	220	5%	1/10W	
R290	1-216-033-00	METAL CHIP	220	5%	1/10W	
R291	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R292	1-216-076-00	METAL GLAZE	13K	5%	1/10W	
R293	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R294	1-216-025-00	METAL CHIP	100	5%	1/10W	
R295	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R296	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R297	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R298	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R299	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R300	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R301	1-216-025-00	METAL CHIP	100	5%	1/10W	
R302	1-216-025-00	METAL CHIP	100	5%	1/10W	
R303	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R306	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R307	1-216-017-00	METAL CHIP	47	5%	1/10W	
R308	1-216-041-00	METAL CHIP	470	5%	1/10W	
R309	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R310	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R311	1-216-073-00	METAL CHIP	10K	5%	1/10W	

PANEL DSP

Ref. No.	Part No.	Description				Remarks
R312	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R313	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R314	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R315	1-216-033-00	METAL CHIP	220	5%	1/10W	
R316	1-216-033-00	METAL CHIP	220	5%	1/10W	
R317	1-216-025-00	METAL CHIP	100	5%	1/10W	
R318	1-216-295-00	METAL CHIP	0	5%	1/10W	
R319	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R320	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R321	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R322	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R323	1-216-295-00	METAL CHIP	0	5%	1/10W	
R331	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R332	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R333	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R334	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R335	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R336	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R337	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R338	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R339	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R340	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R341	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R342	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R343	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R344	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R345	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R346	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R347	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R348	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R349	1-216-129-00	METAL CHIP	2.2M	5%	1/10W	
R350	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R351	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R352	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R353	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R354	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R355	1-216-033-00	METAL CHIP	220	5%	1/10W	
R356	1-216-033-00	METAL CHIP	220	5%	1/10W	
R357	1-216-033-00	METAL CHIP	220	5%	1/10W	
R358	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R359	1-216-129-00	METAL CHIP	2.2M	5%	1/10W	
R360	1-216-001-00	METAL CHIP	10	5%	1/10W	
R361	1-216-033-00	METAL CHIP	220	5%	1/10W	
R364	1-216-033-00	METAL CHIP	220	5%	1/10W	
R391	1-216-044-00	METAL CHIP	620	5%	1/10W	
R392	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R393	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R501	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R502	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R503	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R504	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R505	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R506	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R508	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R511	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R514	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R516	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R518	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R519	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R520	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R521	1-216-025-00	METAL CHIP	100	5%	1/10W	
R522	1-216-025-00	METAL CHIP	100	5%	1/10W	
R523	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R524	1-216-025-00	METAL CHIP	100	5%	1/10W	
R525	1-216-025-00	METAL CHIP	100	5%	1/10W	
R526	1-216-025-00	METAL CHIP	100	5%	1/10W	
R527	1-216-025-00	METAL CHIP	100	5%	1/10W	
R528	1-216-025-00	METAL CHIP	100	5%	1/10W	
R529	1-216-025-00	METAL CHIP	100	5%	1/10W	
R530	1-216-025-00	METAL CHIP	100	5%	1/10W	
R531	1-216-025-00	METAL CHIP	100	5%	1/10W	
R532	1-216-025-00	METAL CHIP	100	5%	1/10W	
R534	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R535	1-216-025-00	METAL CHIP	100	5%	1/10W	
R536	1-216-025-00	METAL CHIP	100	5%	1/10W	
R537	1-216-025-00	METAL CHIP	100	5%	1/10W	
R538	1-216-025-00	METAL CHIP	100	5%	1/10W	
R539	1-216-025-00	METAL CHIP	100	5%	1/10W	
R540	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R541	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R542	1-216-025-00	METAL CHIP	100	5%	1/10W	
R543	1-216-025-00	METAL CHIP	100	5%	1/10W	
R544	1-216-027-00	METAL CHIP	120	5%	1/10W	
R545	1-216-027-00	METAL CHIP	120	5%	1/10W	
R546	1-216-027-00	METAL CHIP	120	5%	1/10W	
R547	1-216-027-00	METAL CHIP	120	5%	1/10W	
R548	1-216-029-00	METAL CHIP	150	5%	1/10W	
R549	1-216-029-00	METAL CHIP	150	5%	1/10W	
R550	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	

Ref. No.	Part No.	Description	Remarks
R551	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R552	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R553	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R554	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R555	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R556	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R557	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R558	1-216-025-00	METAL CHIP 100 5% 1/10W	
R559	1-216-025-00	METAL CHIP 100 5% 1/10W	
R560	1-216-027-00	METAL CHIP 120 5% 1/10W	
R561	1-216-027-00	METAL CHIP 120 5% 1/10W	
R562	1-216-021-00	METAL CHIP 68 5% 1/10W	
R563	1-216-021-00	METAL CHIP 68 5% 1/10W	
R564	1-216-021-00	METAL CHIP 68 5% 1/10W	
R565	1-216-027-00	METAL CHIP 120 5% 1/10W	
R566	1-216-027-00	METAL CHIP 120 5% 1/10W	
R567	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R568	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R569	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R570	1-216-025-00	METAL CHIP 100 5% 1/10W	
R572	1-216-025-00	METAL CHIP 100 5% 1/10W	
R573	1-216-025-00	METAL CHIP 100 5% 1/10W	
R574	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R575	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R576	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R577	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R578	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R579	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R580	1-216-025-00	METAL CHIP 100 5% 1/10W	
R581	1-216-025-00	METAL CHIP 100 5% 1/10W	
R582	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R583	1-216-049-11	METAL CHIP 10K 5% 1/10W	(H6600)
R584	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R585	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R586	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R587	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R588	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R589	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R590	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R591	1-216-019-00	METAL CHIP 56 5% 1/10W	
R592	1-216-019-00	METAL CHIP 56 5% 1/10W	
R593	1-216-019-00	METAL CHIP 56 5% 1/10W	
R594	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R621	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R622	1-216-049-00	METAL CHIP 1K 5% 1/10W	

Ref. No.	Part No.	Description	Remarks
R623	1-216-081-00	METAL CHIP 22K 5% 1/10W	(H5600)

< SWITCH >

Ref. No.	Part No.	Description	Remarks
S501	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S502	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S503	1-554-303-21	SWITCH, TACTILE (BALANCE)	
S504	1-554-303-21	SWITCH, TACTILE (WAKE UP)	
S505	1-554-303-21	SWITCH, TACTILE (DBFB)	
S506	1-554-303-21	SWITCH, TACTILE (EFFECT)	
S507	1-554-303-21	SWITCH, TACTILE (DYNAMIC SOUND)	
S508	1-554-303-21	SWITCH, TACTILE (PRESET)	
S509	1-554-303-21	SWITCH, TACTILE (PARAMETRIC EQUALIZER)	
S510	1-554-303-21	SWITCH, TACTILE (ON/OFF)	
S511	1-554-303-21	SWITCH, TACTILE (PRESENCE SURROUND)	
S512	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S513	1-554-303-21	SWITCH, TACTILE (▶) (CURSOR CONTROL)	
S514	1-554-303-21	SWITCH, TACTILE (▲) (CURSOR CONTROL)	
S515	1-554-303-21	SWITCH, TACTILE (▼) (CURSOR CONTROL)	
S516	1-554-303-21	SWITCH, TACTILE (◀) (CURSOR CONTROL)	
S517	1-554-303-21	SWITCH, TACTILE (VIDEO)	
S518	1-554-303-21	SWITCH, TACTILE (AUDIO)	

< VIBRATOR >

Ref. No.	Part No.	Description	Remarks
X100	1-579-069-11	VIBRATOR, CRYSTAL (49.152MHz)	
X101	1-577-253-11	VIBRATOR, CERAMIC (16.93MHz)	
X102	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	
X501	1-579-351-11	VIBRATOR, CERAMIC (15MHz)	
X502	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	

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Ref. No.	Part No.	Description	Remarks
	* A-4341-619-A	POWER SUPPLY BOARD, COMPLETE (AEP, UK)	
	* A-4341-623-A	POWER SUPPLY BOARD, COMPLETE (G, IT)	
		************************************	
	* 1-638-904-12	JACK BOARD	
		**********	
	* 1-533-213-31	HOLDER, FUSE	
	* 3-309-144-21	HEAT SINK	
	7-682-547-04	SCREW +BVTT 3X6 (S)	

< CAPACITOR >

Ref. No.	Part No.	Description	Remarks
C1	1-124-915-11	ELECT 10uF 20% 63V	
C2	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C3	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C5	1-136-153-00	FILM 0.01uF 5% 50V	
C7	1-162-306-11	CERAMIC 0.01uF 20% 16V	

POWER SUPPLY JACK

Ref. No.	Part No.	Description	Remarks
C651	1-162-282-31	CERAMIC 100PF 10% 50V	
C652	1-162-282-31	CERAMIC 100PF 10% 50V	
C653	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C654	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C655	1-124-903-11	ELECT 1uF 20% 50V	
C656	1-124-119-00	ELECT 330uF 20% 16V	
C661	1-162-282-31	CERAMIC 100PF 10% 50V	
C662	1-162-282-31	CERAMIC 100PF 10% 50V	
C663	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C664	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C665	1-124-903-11	ELECT 1uF 20% 50V	
C903	1-126-943-11	ELECT 2200uF 20% 25V	
C904	1-126-943-11	ELECT 2200uF 20% 25V	
C907	1-136-165-00	FILM 0.1uF 5% 50V	
C908	1-136-165-00	FILM 0.1uF 5% 50V	
C909	1-124-477-11	ELECT 47uF 20% 25V	
C910	1-124-477-11	ELECT 47uF 20% 25V	
C911	1-124-915-11	ELECT 10uF 20% 63V	
C912	1-124-915-11	ELECT 10uF 20% 63V	
C913	1-124-915-11	ELECT 10uF 20% 63V	
C914	1-126-768-11	ELECT 2200uF 20% 16V	
C915	1-124-915-11	ELECT 10uF 20% 63V	
C916	1-124-915-11	ELECT 10uF 20% 63V	
C917	1-124-910-11	ELECT 47uF 20% 50V	
C918	1-124-915-11	ELECT 10uF 20% 63V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remarks
CNJ1	* 1-580-739-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 1)	
CNJ2	* 1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)	
CNP5	* 1-564-509-11	PLUG, CONNECTOR 6P	
CNP6	* 1-564-509-11	PLUG, CONNECTOR 6P	
CNP7	* 1-564-499-11	PIN, CONNECTOR 6P	
CNP902	1-564-506-41	PIN, CONNECTOR 3P (YEL)	
CNP903	* 1-564-321-00	PIN, CONNECTOR 2P	
CNP904	* 1-573-109-11	PIN, CONNECTOR 15P	
CNP904A	1-564-506-31	PIN, CONNECTOR 3P (RED)	
CNP906	* 1-573-087-11	PIN, CONNECTOR 13P	
CNP907	* 1-506-981-11	PIN, CONNECTOR 10P	
CNP908	1-568-317-11	SOCKET, CONNECTOR 6P	
CNP909	* 1-573-148-11	PLUG, CONNECTOR 12P	
CNP910	* 1-564-337-00	PIN, CONNECTOR 3P	
CNP911	* 1-564-505-11	PLUG, CONNECTOR 2P	

< DIODE >

Ref. No.	Part No.	Description	Remarks
D891	8-719-912-20	DIODE 1SS120	
D892	8-719-912-20	DIODE 1SS120	
D901	8-719-302-38	DIODE RBV-602-01	
D902	8-719-912-20	DIODE 1SS120	
D903	8-719-912-20	DIODE 1SS120	
D904	8-719-200-82	DIODE 11ES2	
D905	8-719-200-82	DIODE 11ES2	
D906	8-719-200-82	DIODE 11ES2	
D907	8-719-200-82	DIODE 11ES2	
D908	8-719-200-82	DIODE 11ES2	
D909	8-719-200-82	DIODE 11ES2	
D910	8-719-912-20	DIODE 1SS120	
D911	8-719-933-36	DIODE HZS6B1L	
D919	8-719-912-20	DIODE 1SS120	
D920	8-719-912-20	DIODE 1SS120	

< IC >

Ref. No.	Part No.	Description	Remarks
IC1	8-749-922-41	IC GP1F34R	
IC2	8-749-922-41	IC GP1F34R	
IC3	8-749-922-39	IC GP1F34T	
IC651	8-759-634-50	IC M5218AL	
IC901	8-759-602-66	IC M5230L-A	
IC902	8-759-231-53	IC M5F7805	
ICP903	1-532-846-21	LINK, IC 5A	
ICP904	1-532-846-21	LINK, IC 5A	

< JACK >

Ref. No.	Part No.	Description	Remarks
J2	1-569-662-11	JACK, PIN 1P (SUPER WOOFER)	
J651	1-562-837-21	JACK (HEADPHONES)	
J901	1-526-931-11	INLET, AC (AC IN)	

< COIL >

Ref. No.	Part No.	Description	Remarks
L901	⚠1-424-485-11	FILTER, LINE	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remarks
Q651	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q652	8-729-900-61	TRANSISTOR DTA114ES	
Q661	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q901	8-729-209-15	TRANSISTOR 2SD2012	
Q902	8-729-111-67	TRANSISTOR 2SB1094-L	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER SUPPLY JACK POWER AMP VOLUME SPEAKER FLD CONNECTOR ELECT CAP TRANSFORMER (A),(B)

Ref. No.	Part No.	Description				Remarks
Q903	8-729-900-80	TRANSISTOR	DTC114ES			
Q904	8-729-209-15	TRANSISTOR	2SD2012			
Q905	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q906	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q908	8-729-801-84	TRANSISTOR	2SB1013-4			
Q909	8-729-111-29	TRANSISTOR	2SD1616A-K			
Q910	8-729-111-29	TRANSISTOR	2SD1616A-K			
Q911	8-729-620-05	TRANSISTOR	2SC2603-EF			
		< RESISTOR >				
R651	1-249-433-11	CARBON	22K	5%	1/4W	
R652	1-249-439-11	CARBON	68K	5%	1/4W	
R653	1-249-400-11	CARBON	39	5%	1/4W	
R654	1-249-423-11	CARBON	3.3K	5%	1/4W	
R655	1-249-423-11	CARBON	3.3K	5%	1/4W	
R656	1-249-405-11	CARBON	100	5%	1/4W	
R657	1-249-441-11	CARBON	100K	5%	1/4W	
R661	1-249-433-11	CARBON	22K	5%	1/4W	
R662	1-249-439-11	CARBON	68K	5%	1/4W	
R663	1-249-400-11	CARBON	39	5%	1/4W	
R664	1-249-423-11	CARBON	3.3K	5%	1/4W	
R665	1-249-423-11	CARBON	3.3K	5%	1/4W	
R666	1-249-405-11	CARBON	100	5%	1/4W	
R902	1-247-903-00	CARBON	1M	5%	1/4W	
R905	1-249-413-11	CARBON	470	5%	1/4W	
R906	1-249-434-11	CARBON	27K	5%	1/4W	
R907	1-249-425-11	CARBON	4.7K	5%	1/4W	
R908	1-249-431-11	CARBON	15K	5%	1/4W	
R909	1-249-431-11	CARBON	15K	5%	1/4W	
R910	1-249-419-11	CARBON	1.5K	5%	1/4W	
R911	1-249-429-11	CARBON	10K	5%	1/4W	
R912	1-249-429-11	CARBON	10K	5%	1/4W	
R913	1-249-429-11	CARBON	10K	5%	1/4W	
R914	1-249-429-11	CARBON	10K	5%	1/4W	
R919	1-249-429-11	CARBON	10K	5%	1/4W	
R920	1-249-429-11	CARBON	10K	5%	1/4W	
R921	⚠1-216-428-00	METAL OXIDE	180	5%	1W	F
R922	1-249-429-11	CARBON	10K	5%	1/4W	
R923	1-249-425-11	CARBON	4.7K	5%	1/4W	
R924	1-249-429-11	CARBON	10K	5%	1/4W	
R925	1-249-429-11	CARBON	10K	5%	1/4W	
R926	1-249-429-11	CARBON	10K	5%	1/4W	
R928	1-247-742-11	CARBON	180	5%	1/2W	
R930	1-249-423-11	CARBON	3.3K	5%	1/4W	
R931	1-249-441-11	CARBON	100K	5%	1/4W	
R932	1-249-429-11	CARBON	10K	5%	1/4W	
		< RELAY >				
RY801	1-515-790-11	RELAY				
RY802	1-515-790-11	RELAY				
RY901	1-515-626-11	RELAY				

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	* A-4341-620-A	POWER AMP BOARD, COMPLETE (AEP, UK)				
	* A-4341-624-A	POWER AMP BOARD, COMPLETE (G, IT)				
		**********************************				
	* 1-638-906-12	VOLUME BOARD				
		************				
	* 1-638-907-12	SPEAKER BOARD				
		*************				
	* 1-638-908-13	FLD BOARD				
		*********				
	* 1-638-909-12	CONNECTOR BOARD				
		***************				
	* 1-638-910-12	ELECT CAP BOARD				
		***************				
	* 1-638-911-12	TRANSFORMER (A) BOARD				
		*********************				
	* 1-638-912-12	TRANSFORMER (B) BOARD				
		*********************				
	* 3-309-144-21	HEAT SINK				
	7-682-547-04	SCREW +BVTT 3X6 (S)				
		< CAPACITOR >				
C401	1-126-948-11	ELECT	100uF	20%	3V	
C402	1-130-955-00	FILM	0.01uF	5%	10V	
C403	1-126-948-11	ELECT	100uF	20%	3V	
C404	1-130-477-00	MYLAR	0.0033uF	5%	5V	
C405	1-126-948-11	ELECT	100uF	20%	3V	
C406	1-124-931-11	ELECT	47uF	47%	10V	
C421	1-136-955-00	FILM	0.01uF	5%	10V	
C601	1-162-306-11	CERAMIC	0.01uF	20%	1V	
C602	1-126-933-11	ELECT	100uF	20%	1V	
C603	1-124-915-11	ELECT	10uF	20%	6V	
C604	1-124-915-11	ELECT	10uF	20%	6V	
C701	1-126-176-11	ELECT	220uF	20%	1V	
C702	1-126-176-11	ELECT	220uF	20%	1V	
C704	1-162-306-11	CERAMIC	0.01uF	20%	1V	
C705	1-161-494-00	CERAMIC	0.022uF		2V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWE AMP | VOLUME | SPEAKER | FLD | CONNECTOR

ELECT CAP | TRANSFORMER (A),(B)

Ref. No.	Part No.	Description				Remarks
C706	1-124-927-11	ELECT	4.7uF	20%	100V	
C707	1-126-101-11	ELECT	100uF	20%	16V	
C708	1-124-907-11	ELECT	10uF	20%	50V	
C709	1-164-159-11	CERAMIC	0.1uF		50V	
C710	1-124-910-11	ELECT	47uF	20%	50V	
C711	1-164-159-11	CERAMIC	0.1uF		50V	
C801	1-124-907-11	ELECT	10uF	20%	50V	
C802	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C803	1-162-282-31	CERAMIC	100PF	10%	50V	
C804	1-124-927-11	ELECT	4.7uF	20%	100V	
C806	1-136-165-00	FILM	0.1uF	5%	50V	
C807	1-136-165-00	FILM	0.1uF	5%	50V	
C808	1-136-165-00	FILM	0.1uF	5%	50V	
C809	1-136-165-00	FILM	0.1uF	5%	50V	
C821	1-124-907-11	ELECT	10uF	20%	50V	
C822	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C823	1-162-282-31	CERAMIC	100PF	10%	50V	
C824	1-124-927-11	ELECT	4.7uF	20%	100V	
C828	1-136-165-00	FILM	0.1uF	5%	50V	
C829	1-136-165-00	FILM	0.1uF	5%	50V	
C831	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C851	1-124-907-11	ELECT	10uF	20%	50V	
C852	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C853	1-162-282-31	CERAMIC	100PF	10%	50V	
C854	1-124-927-11	ELECT	4.7uF	20%	100V	
C856	1-136-165-00	FILM	0.1uF	5%	50V	
C857	1-136-165-00	FILM	0.1uF	5%	50V	
C858	1-136-165-00	FILM	0.1uF	5%	50V	
C859	1-136-165-00	FILM	0.1uF	5%	50V	
C871	1-124-907-11	ELECT	10uF	20%	50V	
C872	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C873	1-162-282-31	CERAMIC	100PF	10%	50V	
C874	1-124-927-11	ELECT	4.7uF	20%	100V	
C878	1-136-165-00	FILM	0.1uF	5%	50V	
C879	1-136-165-00	FILM	0.1uF	5%	50V	
C891	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C892	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C893	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C894	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C901	1-128-329-11	ELECT	10000uF	20%	42V	
C902	1-128-329-11	ELECT	10000uF	20%	42V	
C905	1-136-171-00	FILM	0.33uF	5%	50V	
C906	1-136-171-00	FILM	0.33uF	5%	50V	
C921	1-126-948-11	ELECT	100uF	20%	35V	
C923	1-126-949-11	ELECT	220uF	20%	35V	
C924	1-126-949-11	ELECT	220uF	20%	35V	
C925	1-126-948-11	ELECT	100uF	20%	35V	
C926	1-164-159-11	CERAMIC	0.1uF		50V	
C927	1-124-915-11	ELECT	10uF	20%	63V	
C928	1-124-915-11	ELECT	10uF	20%	63V	
C929	1-124-557-11	ELECT	1000uF	20%	25V	
C930	1-124-557-11	ELECT	1000uF	20%	25V	
		< CONNECTOR >				
CN601	1-560-942-00	PIN, CONNECTOR 6P				
CN801	* 1-564-521-11	PLUG, CONNECTOR 6P				
CN802	* 1-573-087-11	PIN, CONNECTOR 13P				
CN891	1-563-311-11	CONNECTOR, BOARD TO BOARD 10P				
CN892	* 1-564-518-11	PLUG, CONNECTOR 3P				
CNJ603	1-569-656-11	HOUSING, CONNECTOR 8P				
CNJ604	1-573-147-11	HOUSING, CONNECTOR 12P				
CNJ902	1-573-095-11	SOCKET, CONNECTOR 15P				
CNJ911	* 1-573-094-11	SOCKET, CONNECTOR 13P				
CNJ912	* 1-573-094-11	SOCKET, CONNECTOR 13P				
CNP7	* 1-564-499-11	PIN, CONNECTOR 6P				
CNP602	1-568-319-11	SOCKET, CONNECTOR 8P				
CNP901	* 1-564-321-00	PIN, CONNECTOR 2P				
CNP912	* 1-564-338-00	PIN, CONNECTOR 4P				
CNP913	* 1-564-337-00	PIN, CONNECTOR 3P				
CNP914	* 1-564-339-00	PIN, CONNECTOR 5P				
CNP915	* 1-564-505-11	PLUG, CONNECTOR 2P				
		< DIODE >				
D401	8-719-815-85	DIODE	1S1585			
D402	8-719-933-67	DIODE	HZS11B2L			
D403	8-719-933-47	DIODE	HZS7B2L			
D404	8-719-815-85	DIODE	1S1585			
D405	8-719-815-85	DIODE	1S1585			
D406	8-719-200-82	DIODE	11ES2			
D409	8-719-934-22	LED	HZS30-2L			
D701	8-719-912-20	DIODE	1SS120			
D702	8-719-912-20	DIODE	1SS120			
D703	8-719-912-20	DIODE	1SS120			
D704	8-719-912-20	DIODE	1SS120			
D705	8-719-912-20	DIODE	1SS120			
D706	8-719-912-20	DIODE	1SS120			
D801	8-719-912-20	DIODE	1SS120			
D802	8-719-912-20	DIODE	1SS120			

POWE AMP VOLUME SPEAKER FLD CONNECTOR ELECT CAP TRANSFORMER (A),(B)

Ref. No.	Part No.	Description	Remarks
D821	8-719-912-20	DIODE 1SS120	
D822	8-719-912-20	DIODE 1SS120	
D851	8-719-912-20	DIODE 1SS120	
D852	8-719-912-20	DIODE 1SS120	
D871	8-719-912-20	DIODE 1SS120	
D872	8-719-912-20	DIODE 1SS120	
D912	8-719-200-82	DIODE 11ES2	
D913	8-719-200-82	DIODE 11ES2	
D914	8-719-934-22	DIODE HZS30-2L	
D915	8-719-200-82	DIODE 11ES2	
D916	8-719-200-82	DIODE 11ES2	
D917	8-719-934-22	DIODE HZS30-2L	
D918	8-719-014-88	DIODE UZP-6.8BC	
D921	8-719-200-82	DIODE 11ES2	
D922	8-719-200-82	DIODE 11ES2	
D923	8-719-200-82	DIODE 11ES2	
D924	8-719-200-82	DIODE 11ES2	
		< IC >	
IC601	8-759-820-62	IC LB1639	
IC701	8-759-111-68	IC uPC1237HA	
IC702	8-759-987-16	IC LM393P	
IC703	8-759-512-73	IC LM35DZ-SL	
IC801	8-759-323-30	IC LM3875-2	
IC821	8-759-323-30	IC LM3875-2	
IC851	8-759-323-30	IC LM3875-2	
IC871	8-759-323-30	IC LM3875-2	
ICP901	⚠1-532-845-21	LINK, IC 4A	
ICP902	⚠1-532-845-21	LINK, IC 4A	
ICP905	⚠1-532-842-11	LINK, IC 2A	
ICP906	⚠1-532-842-11	LINK, IC 2A	
		< JACK >	
J891	1-537-336-11	TERMINAL BOARD (SP) (TO SATELLITE/BASS UNIT SPEAKER)	
		< COIL >	
L401	1-410-761-11	INDUCTOR 0.68mH	
L402	1-410-521-11	MICRO INDUCTOR	
L801	* 1-420-872-00	COIL, AIR CORE	
L821	* 1-420-872-00	COIL, AIR CORE	
L851	* 1-420-872-00	COIL, AIR CORE	
L871	* 1-420-872-00	COIL, AIR CORE	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
		< TRANSISTOR >	
Q401	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q402	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q403	8-729-142-01	TRANSISTOR 2SC1941-LK	
Q404	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q601	8-729-801-93	TRANSISTOR 2SD1387-3	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q821	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q871	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q911	8-729-209-15	TRANSISTOR 2SD2012	
Q912	8-729-111-67	TRANSISTOR 2SA473	
		< RESISTOR >	
R401	1-249-437-11	CARBON 47K 5% 1/4W	
R402	1-249-437-11	CARBON 47K 5% 1/4W	
R404	⚠1-213-056-11	FUSIBLE 6.8 5% 1W	F
R405	1-249-441-11	CARBON 100K 5% 1/4W	
R406	1-249-437-11	CARBON 47K 5% 1/4W	
R407	1-249-405-11	CARBON 100 5% 1/4W	
R408	1-247-756-11	CARBON 2.2K 5% 1/2W	
R409	1-249-437-11	CARBON 47K 5% 1/4W	
R411	⚠1-213-056-11	FUSIBLE 6.8 5% 1W	F
R601	⚠1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
R602	1-249-419-11	CARBON 1.5K 5% 1/4W	
R603	1-249-422-11	CARBON 2.7K 5% 1/4W	
R604	1-249-429-11	CARBON 10K 5% 1/4W	
R605	1-249-429-11	CARBON 10K 5% 1/4W	
R606	1-249-416-11	CARBON 820 5% 1/4W	
R701	1-249-433-11	CARBON 22K 5% 1/4W	
R702	1-249-441-11	CARBON 100K 5% 1/4W	
R703	1-249-433-11	CARBON 22K 5% 1/4W	
R704	1-249-433-11	CARBON 22K 5% 1/4W	
R705	1-249-429-11	CARBON 10K 5% 1/4W	
R706	1-249-441-11	CARBON 100K 5% 1/4W	(AEP,UK>
R707	1-249-429-11	CARBON 10K 5% 1/4W	
R708	1-249-424-11	CARBON 3.9K 5% 1/4W	
R709	1-249-427-11	CARBON 6.8K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-417-11	CARBON 1K 5% 1/4W	
R712	1-249-437-11	CARBON 47K 5% 1/4W	(AEP,UK>
R802	1-249-437-11	CARBON 47K 5% 1/4W	
R803	1-249-420-11	CARBON 1.8K 5% 1/4W	
R804	1-249-437-11	CARBON 47K 5% 1/4W	

POWE AMP VOLUME SPEAKER FLD CONNECTOR ELECT CAP TRANSFORMER (A),(B)

Ref. No.	Part No.	Description	Remarks
R805	⚠1-217-151-00	RES, METAL PLATE 0.22 2W	F
R806	1-249-417-11	CARBON 1K 5% 1/4W	
R807	1-249-431-11	CARBON 15K 5% 1/4W	
R808	1-249-441-11	CARBON 100K 5% 1/4W	
R809	⚠1-212-958-00	FUSIBLE 10 5% 1/2W	F
R810	1-249-439-11	CARBON 68K 5% 1/4W	
R811	1-249-429-11	CARBON 10K 5% 1/4W	
R821	1-249-417-11	CARBON 1K 5% 1/4W	
R822	1-249-437-11	CARBON 47K 5% 1/4W	
R823	1-249-420-11	CARBON 1.8K 5% 1/4W	
R824	1-249-438-11	CARBON 56K 5% 1/4W	
R825	⚠1-217-151-00	RES, METAL PLATE 0.22 2W	F
R826	1-249-417-11	CARBON 1K 5% 1/4W	
R827	1-249-431-11	CARBON 15K 5% 1/4W	
R828	1-249-441-11	CARBON 100K 5% 1/4W	
R829	⚠1-212-958-00	FUSIBLE 10 5% 1/2W	F
R830	1-249-437-11	CARBON 47K 5% 1/4W	
R831	1-249-429-11	CARBON 10K 5% 1/4W	
R851	1-249-417-11	CARBON 1K 5% 1/4W	
R852	1-249-437-11	CARBON 47K 5% 1/4W	
R853	1-249-420-11	CARBON 1.8K 5% 1/4W	
R854	1-249-437-11	CARBON 47K 5% 1/4W	
R855	⚠1-217-151-00	RES, METAL PLATE 0.22 2W	F
R856	1-249-417-11	CARBON 1K 5% 1/4W	
R857	1-249-431-11	CARBON 15K 5% 1/4W	
R858	1-249-441-11	CARBON 100K 5% 1/4W	
R859	⚠1-212-958-00	FUSIBLE 10 5% 1/2W	F
R860	1-249-438-11	CARBON 56K 5% 1/4W	
R861	1-249-429-11	CARBON 10K 5% 1/4W	
R871	1-249-417-11	CARBON 1K 5% 1/4W	
R872	1-249-437-11	CARBON 47K 5% 1/4W	
R873	1-249-420-11	CARBON 1.8K 5% 1/4W	
R874	1-249-438-11	CARBON 56K 5% 1/4W	
R875	⚠1-217-151-00	RES, METAL PLATE 0.22 2W	F
R876	1-249-417-11	CARBON 1K 5% 1/4W	
R877	1-249-431-11	CARBON 15K 5% 1/4W	
R878	1-249-441-11	CARBON 100K 5% 1/4W	
R879	⚠1-212-958-00	FUSIBLE 10 5% 1/2W	F
R880	1-249-436-11	CARBON 39K 5% 1/4W	
R881	1-249-429-11	CARBON 10K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
R916	⚠1-249-429-11	CARBON 1K 5% 1/2W	F
R917	⚠1-247-752-11	CARBON 1K 5% 1/2W	F
R891	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
R892	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
R893	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
R894	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
R918	1-249-441-11	CARBON 100K 5% 1/4W	

< VARIABLE RESISTOR >

RV601	1-241-418-11	RES, VAR, CARBON 10K (VOLUME)

< TRANSFORMER >

T401	1-450-460-11	TRANSFORMER, DC-DC CONVERTER
T402	1-450-461-11	TRANSFORMER, DC-DC CONVERTER

****

MISCELLANEOUS

11	1-541-860-11	MOTOR, DC FAN
F901	⚠1-532-286-00	FUSE (T2.5A)
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT
PT101	⚠1-450-355-11	TRANSFORMER, POWER (UK)
PT101	⚠1-450-356-11	TRANSFORMER, POWER (AEP, G, IT)

****

ACCESSORIES & PACKING MATERIALS

*	4-945-075-01	CUSHION (RIGHT)
*	4-945-076-01	CUSHION (LEFT)

****

HARDWARE LIST

#2	7-685-203-19	SCREW +KTP 2X5 TYPE2 NON-SLIT
#3	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S
#6	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#7	7-685-870-09	SCREW +BVTT 3X5 (S)
#8	7-682-547-04	SCREW +BVTT 3X6 (S)
#9	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3

English
91I1659-1

Sony Corporation
Audio Group

9-956-560-11

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Published by Customer Relations and Service Group

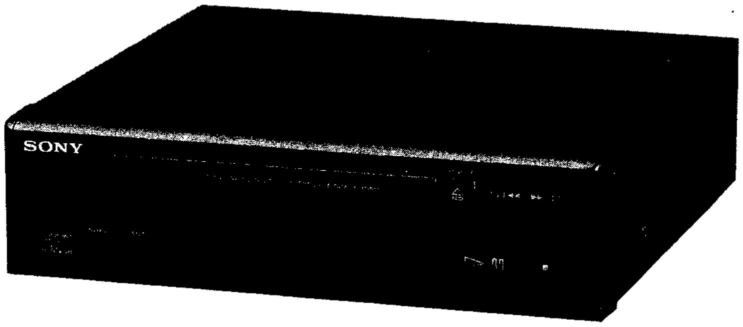
Printed by: Schaltungsdienst Lange, Berlin (GERMANY)

3772

CDP-H6600

SERVICE MANUAL

AEP Model
UK Model
E Model



This set is the CD player section in MHC-5600/6600 and FH-E939CD.

Model Name Using Similar Mechanism	CDP-H300
CD Mechanism Type	CDM13B-5BD5
Base Unit Name	BU-5BD5

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SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Signal to noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (at 1 kHz)
Channel separation	More than 90 dB
Output level	2 V (at 50 kilohms)
Load impedance	More than 10 kilohms
Outputs	DIGITAL OUT OPTICAL (optical output connector): wave length 660 nm, output level –18 dBm

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

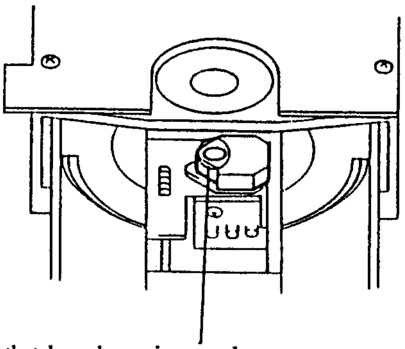
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

COMPACT DISC PLAYER

SONY®

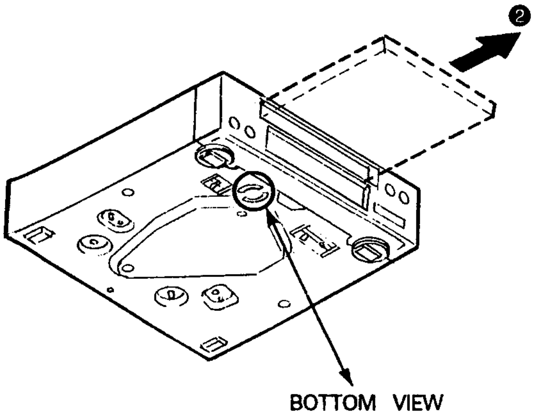
LASER DIODE AND FOCUS SEARCH OPERATION CHECK

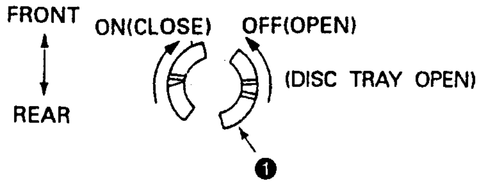
1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



❶ Confirm that laser beam is spread.
❷ Up and down motion of the objective lens. (3 times)

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF





(1) Insert to ❶ for tapering driver, etc., and turn in the direction of arrow OFF. (Disc tray open)
(2) Tray as come out little of front panel, pull out in the direction of arrow ❷ by hand.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

- The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective sureface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

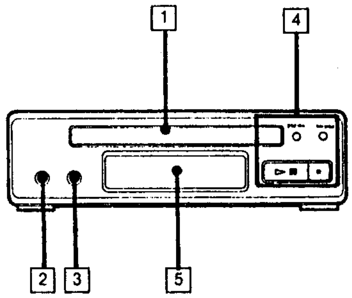
SECTION 1
GENERAL

LOCATION OF CONTROLS

This section is extracted from instruction manual.

CD Player Section

1 Disc tray
2 CHECK button
3 EDIT/TIME FADE button
4 CD operation buttons
  ⏏ : OPEN/CLOSE
  ▷II : Play/pause
  ⏮ ◀◀ ▶▶ ⏭ : Manual search (when kept depressed)/Automatic Music Sensor (when pressed)
5 Display window

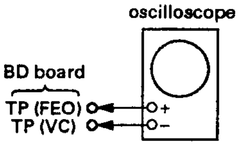


SECTION 2
ELECTRICAL BLOCK CHECKING

Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

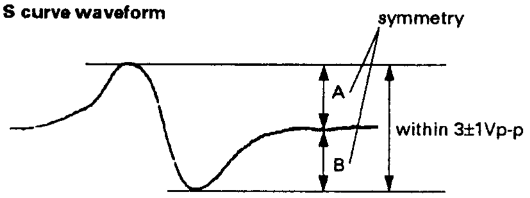
S Curve Check


oscilloscope
BD board
TP (FEO)
TP (VC)
+
−

Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

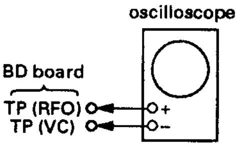
S curve waveform


symmetry
A
B
within 3±1Vp-p

5. After check, remove the lead wire connected in step 2.

Note :
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

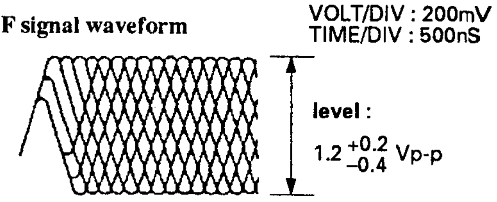

oscilloscope
BD board
TP (RFO)
TP (VC)
+
−

Procedure :

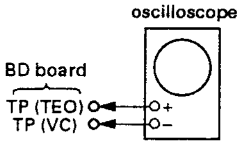
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :
Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

RF signal waveform


VOLT/DIV : 200mV
TIME/DIV : 500nS
level :
1.2 +0.2 −0.4 Vp-p

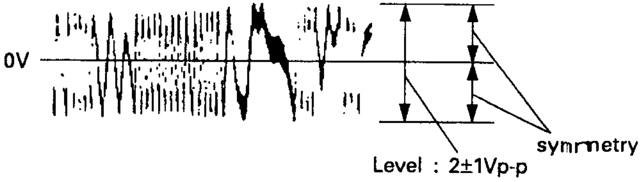
E-F Balance Check


oscilloscope
BD board
TP (TEO)
TP (VC)
+
−

Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope

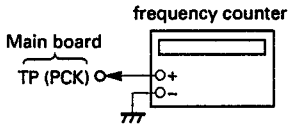

0V
symmetry
Level : 2±1Vp-p

6. Remove the lead wire connected in step 1.

RF PLL FREE-RUN FREQUENCY CHECK

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.


frequency counter
Main board
TP (PCK)
+
–

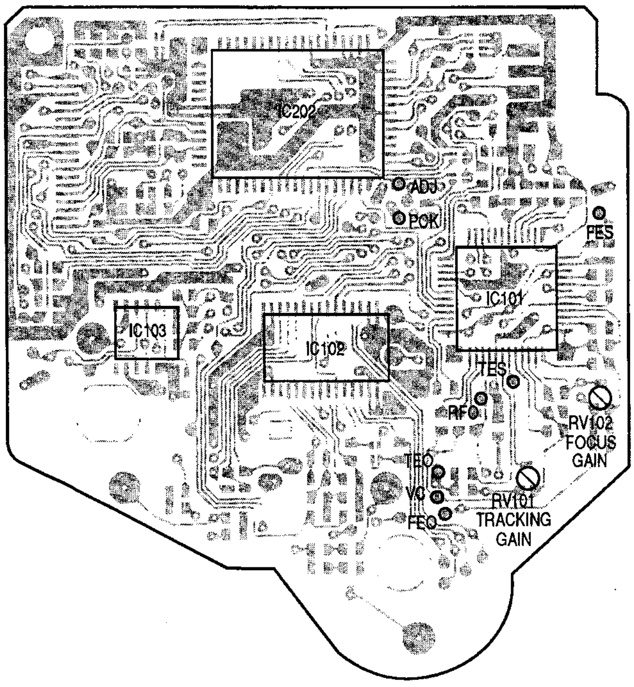
2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Checking for Location

[BD BOARD] – Conductor Side –


IC202
ADJ
PCK
FES
IC101
IC103
IC102
TES
RFO
RV102
FOCUS
GAIN
TEO
VC
FEO
RV101
TRACKING
GAIN

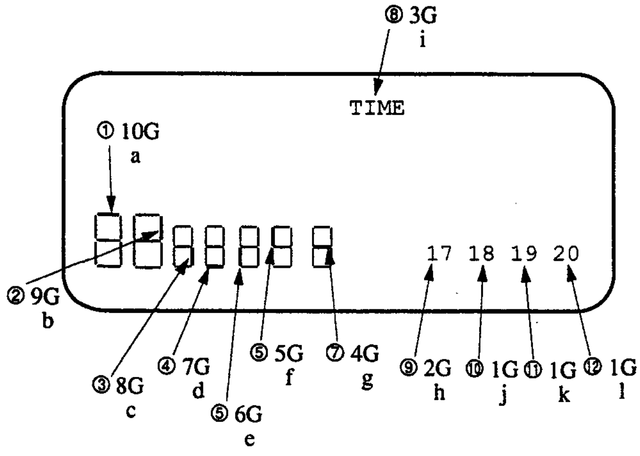
[TEST MODES]

1. Test mode of display micon (IC401)

Ground Pin ㉝ of IC401 to GND and turn ON the POWER switch, thus you can test the following 3 tests.

(1) All FL tube lamps
This mode is actuated immediately after turning ON the POWER switch.

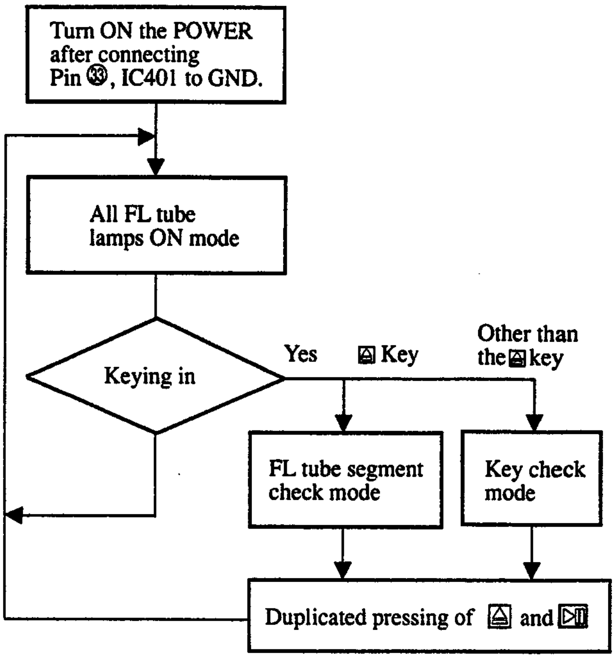
(2) FL tube segment check
This mode is actuated by pressing the ⏏ key in the state of (1). Every time the ⏏ key is pressed, the segments are indicated sequentially from the segment a. When the last 1 segment is displayed, keying in is no longer accepted while continuing the lighting-up state of the last segment. Conditions are normal provided all lamps light up in the following order.



⑧ 3G
i
TIME
① 10G
a
17 18 19 20
② 9G
b
③ 8G
c
④ 7G
d
⑤ 5G
f
⑤ 6G
e
⑦ 4G
g
⑨ 2G
h
⑩ 1G
j
⑪ 1G
k
⑫ 1G
l

(3) KEY check
This mode is effected by pressing the ⏏ key in the state of (1), while indicating "1." Every time a new key is pressed subsequently, the indicated number is incremented. Conditions are normal provided "7" is indicated when all types of keys are pressed. Even if a key is pressed again, it is not counted.

* To leave the mode (2) or (3), press the ⏏ and ⏯ keys in duplication, thereby the mode returning to all ON mode.



Turn ON the POWER after connecting Pin ㉝, IC401 to GND.
All FL tube lamps ON mode
Keying in
Yes
⏏ Key
Other than the ⏏ key
FL tube segment check mode
Key check mode
Duplicated pressing of ⏏ and ⏯

2. Test Modes of CD Syscon (IC202)

(1) ADJUST mode
When this mode is effected, the machine is operated normally except for the following.

- When pin ⑲, IC202 (ADJ) is set to "L" after turning ON the POWER switch:

1. GFS is no longer monitored during PLAY, PAUSE or SEARCH, while not stopping even with GFS remaining still at "L" (NG).
2. No high-speed feeding is activated during SEARCH.
3. Focus gain is reset to normal gain during PLAY (normally, the gain is lowered to reduce noise when FOCUS is locked).

- When Pin ⑬, IC202 (AFADJ) is set to "L" after turning ON the POWER switch:

1. Regardless of Pin ⑲ (ADJ) of the CLV-S fixed function, the CLV mode during PLAY becomes CLV-S (rough servo) only while Pin ⑬ remains "L".

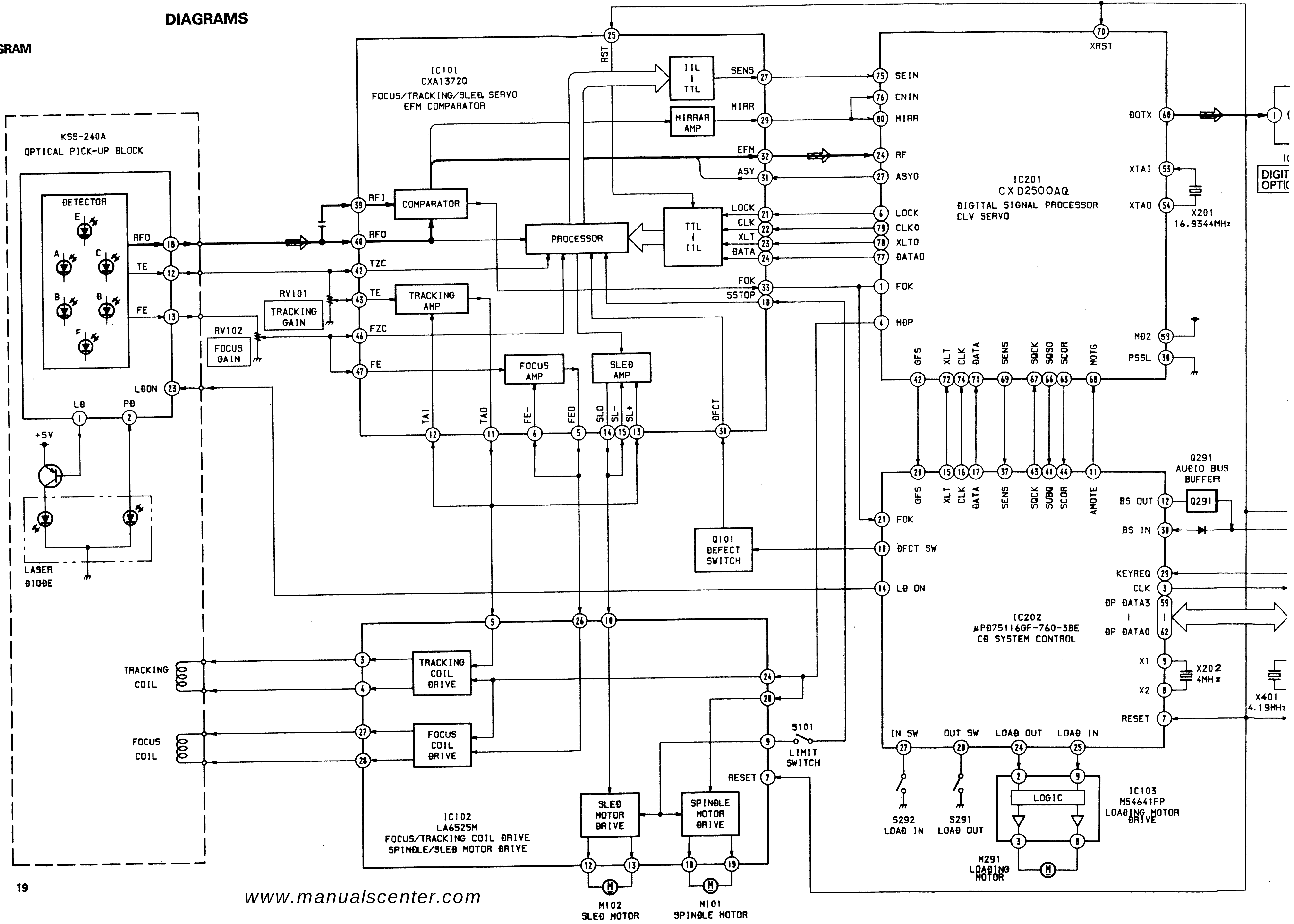
(2) AFADJUST mode
In this mode, it is possible to check the interface between the display micon (IC401) and CD syscon (IC202).

- Set Pin ⑬, IC202 (AFADJ) to "L" before turning ON the POWER switch.

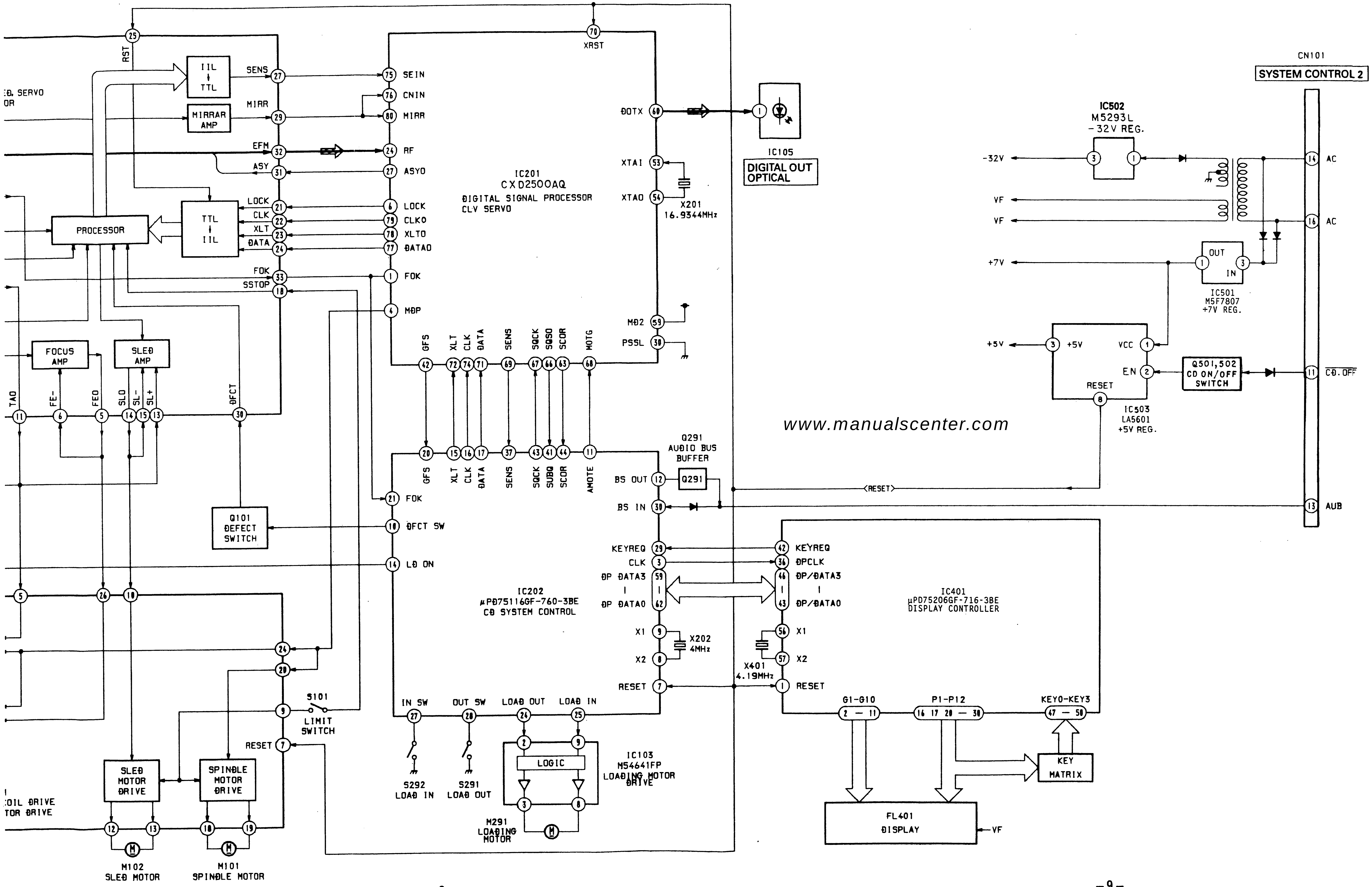
1. Every time the ⏏ key is pressed after turning On the POWER switch, indication on the FL tube is switched correspondingly. Conditions are normal provided the indication repeats the 4 patterns including all lamp ON.

SECTION 3
DIAGRAMS

3-1. BLOCK DIAGRAM

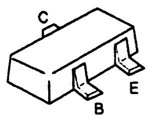

KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
E
A
C
B
D
F
RFO
TE
FE
LDON
LD
PD
+5V
LASER DIODE
IC101
CXA1372Q
FOCUS/TRACKING/SLED SERVO
EFM COMPARATOR
RST
RFI
RFO
TZC
TE
FZC
FE
COMPARATOR
PROCESSOR
TRACKING AMP
FOCUS AMP
SLED AMP
RV101
TRACKING GAIN
RV102
FOCUS GAIN
IIL → TTL
MIRRAR AMP
TTL → IIL
SENS
MIRR
EFM
ASY
LOCK
CLK
XLT
DATA
FOK
SSTOP
DFCT
TA1
TAO
FE-
FEO
SLO
SL-
SL+
Q101
DEFECT SWITCH
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
SEIN
CNIN
MIRR
RF
ASYO
LOCK
CLKO
XLTO
DATAO
FOK
MDP
XRST
DOTX
XTAI
XTAO
X201
16.9344MHz
MD2
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MDTG
Q291
AUDIO BUS BUFFER
BS OUT
BS IN
KEYREQ
CLK
DP DATA3
DP DATA0
X1
X2
X202
4MHz
X401
4.19MHz
RESET
GFS
XLT
CLK
DATA
SENS
SQCK
SUBQ
SCOR
AMDTE
FOK
DFCT SW
LD ON
IC202
μPD75116GF-760-3BE
CD SYSTEM CONTROL
IN SW
OUT SW
LOAD OUT
LOAD IN
S292
LOAD IN
S291
LOAD OUT
LOGIC
IC103
M54641FP
LOADING MOTOR DRIVE
M291
LOADING MOTOR
TRACKING COIL
FOCUS COIL
TRACKING COIL DRIVE
FOCUS COIL DRIVE
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
IC102
LA6525M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
RESET
S101
LIMIT SWITCH
M102
SLED MOTOR
M101
SPINDLE MOTOR
DIGIT
OPTIC

19

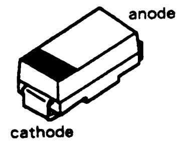

RST
IIL → TTL
SENS
MIRR
MIRRAR AMP
EFM
ASY
LOCK
CLK
XLT
DATA
FOK
SSTOP
TTL → IIL
PROCESSOR
FOCUS AMP
SLED AMP
TAO
FE-
FEO
SLO
SL-
SL+
DFCT
Q101 DEFECT SWITCH
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCK
CLKO
XLTO
DATAO
FOK
MDP
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
DOTX
XTAI
XTAO
X201
16.9344MHz
MD2
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MOTG
SUBQ
AMOTE
IC105
DIGITAL OUT OPTICAL
Q291 AUDIO BUS BUFFER
BS OUT
BS IN
FOK
DFCT SW
LD ON
KEYREQ
CLK
DP DATA3
DP DATA0
IC202
µPD75116GF-760-3BE
CD SYSTEM CONTROL
X1
X2
X202 4MHz
RESET
IN SW
OUT SW
LOAD OUT
LOAD IN
S292 LOAD IN
S291 LOAD OUT
LOGIC
IC103
M54641FP
LOADING MOTOR DRIVE
M291 LOADING MOTOR
S101 LIMIT SWITCH
RESET
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
M102 SLED MOTOR
M101 SPINDLE MOTOR
COIL DRIVE
TOR DRIVE
ED, SERVO
OR
KEYREQ
DPCLK
DP/DATA3
DP/DATA0
IC401
µPD75206GF-716-3BE
DISPLAY CONTROLLER
X1
X2
X401
4.19MHz
RESET
G1-G10
P1-P12
KEY0-KEY3
KEY MATRIX
FL401 DISPLAY
VF
RESET
CN101
SYSTEM CONTROL 2
IC502
M5293L
-32V REG.
-32V
VF
VF
+7V
+5V
AC
AC
OUT
IN
IC501
M5F7807
+7V REG.
+5V
VCC
EN
RESET
IC503
LA5601
+5V REG.
Q501,502
CD ON/OFF SWITCH
CD.OFF
AUB

3-2. SEMICONDUCTOR LEAD LAYOUTS

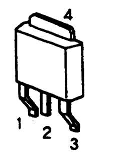
2SA1162-G
2SC3052-EF
2SC3395
2SC3624A-L16
2SC4154-F



EC10DS2
EC10QS-04

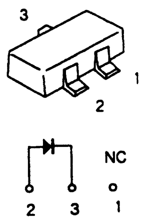

anode
cathode

2SA1341
2SB1122-S

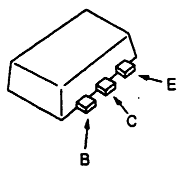


1 : BASE
2 : COLLECTOR
3 : EMITTER
4 : COLLECTOR

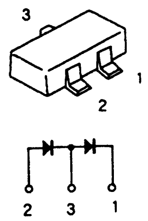
RD6.8M-B2
RD8.2M-B3



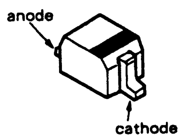
2SB1122-S
2SD1623



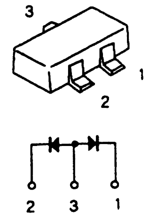
1SS266



DTZ4.7B
1SS355


anode
cathode

1S2836

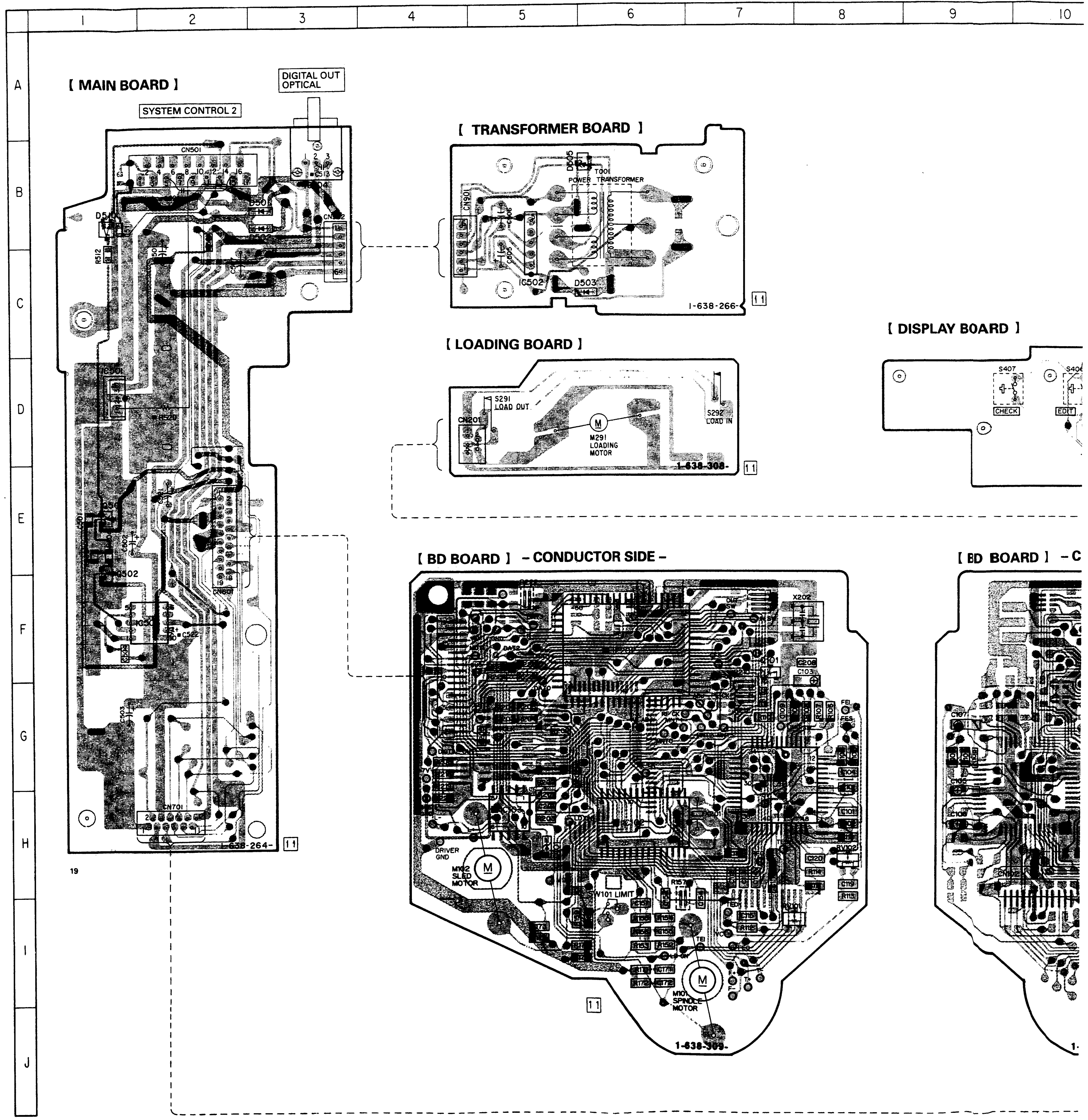


• SEMICONDUCTOR LOCATION

Ref. No.	Location
IC101	D-1
IC101	G-7
IC102	B-5
IC102	H-6
IC103	B-2
IC103	H-5
IC105	B-3
IC201	G-11
IC202	F-6
IC301	G-12
IC302	F-12
IC304	F-1
IC401	D-12
Q101	C-1
Q101	F-7
Q102	B-1
Q103	B-1
Q201	F-12
Q201	G-13
Q301	G-1
Q302	E-1
Q303	G-1
Q304	E-1
Q305	E-1
Q306	E-1
D101	B-3
D101	H-5
D102	B-3
D103	B-3
D104	B-6
D106	B-6
D113	B-3
D131	B-3
D201	F-12
D301	E-1
D302	E-1
D305	E-1
D306	E-1
D401	D-14
D402	D-15
D403	D-11

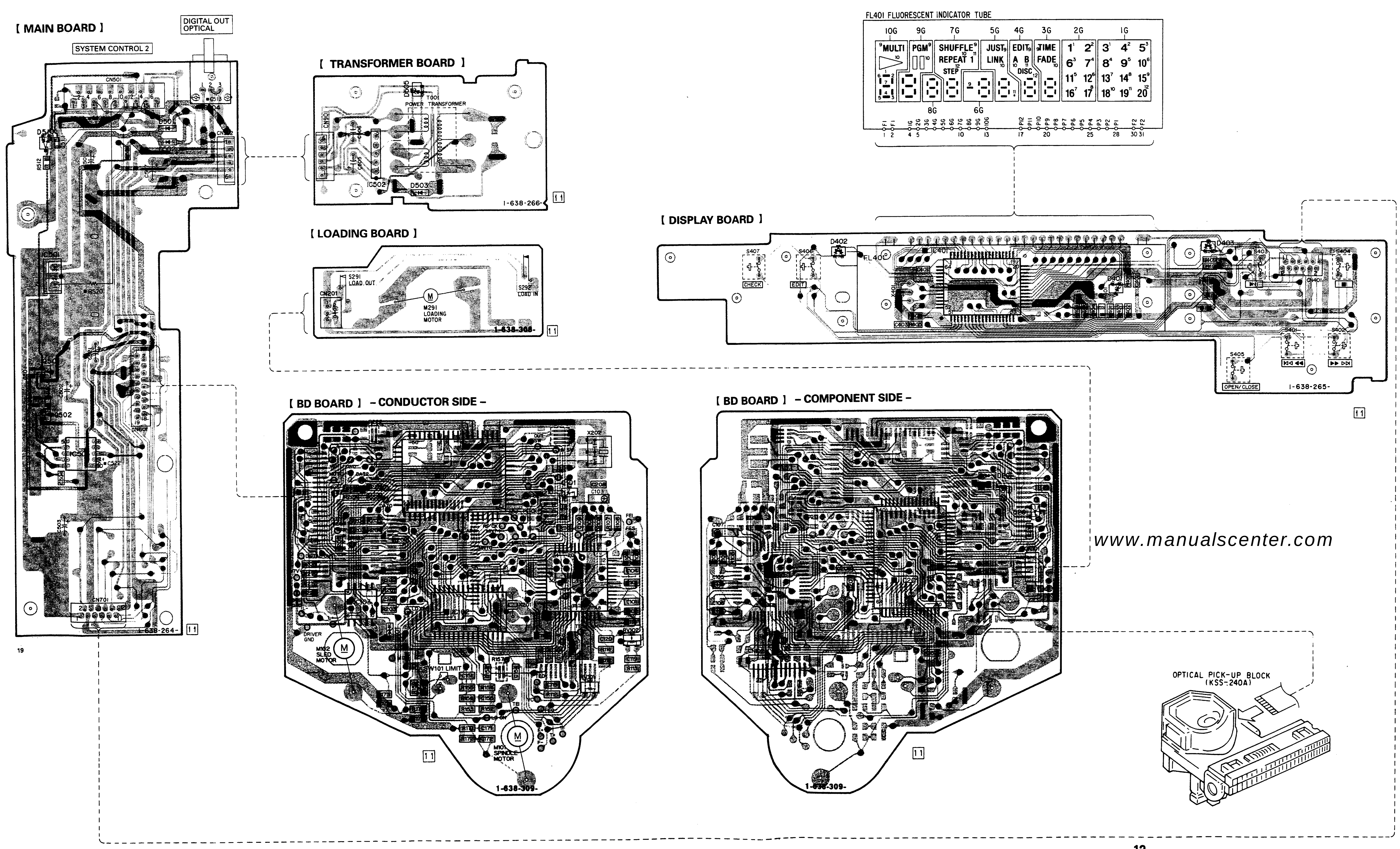
Note:
- •o——— : indicated a lead wire mounted on the component side.
- ■ : Part mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

3-3. PRINTED WIRING BOARDS

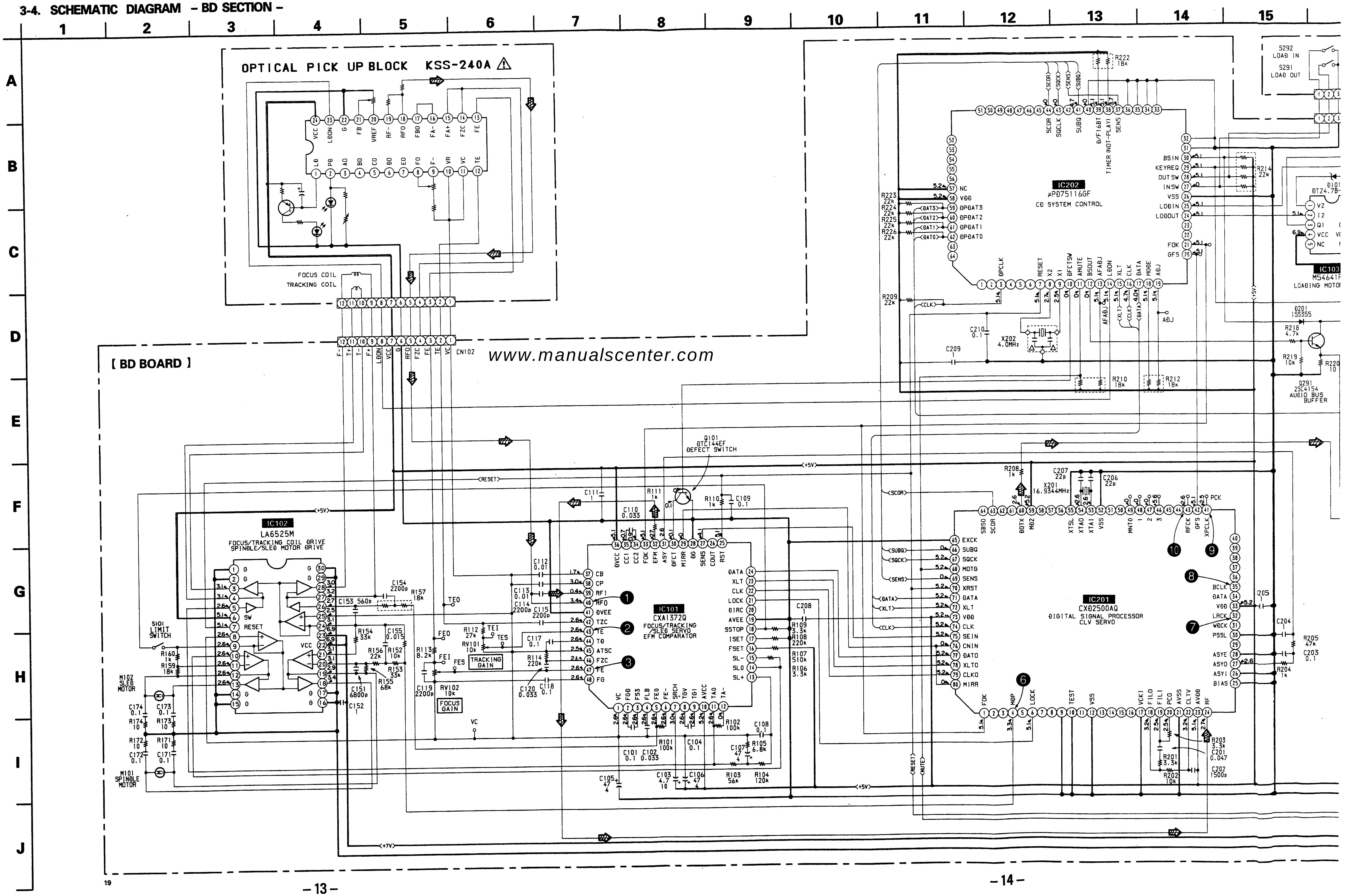

1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
[MAIN BOARD]
DIGITAL OUT OPTICAL
SYSTEM CONTROL 2
CN501
R512
IC501
R520
IC502
C502
CN701
1-638-264-
11
19
[TRANSFORMER BOARD]
T001
POWER TRANSFORMER
D505
D501
IC502
D503
1-638-266-
11
[LOADING BOARD]
CN201
S291
LOAD OUT
S292
LOAD IN
M
M291
LOADING
MOTOR
1-638-308-
11
[DISPLAY BOARD]
S407
CHECK
EDIT
[BD BOARD] - CONDUCTOR SIDE -
X202
DRIVER GND
M
M102
SLED
MOTOR
S101 LIMIT
M
M101
SPINDLE
MOTOR
1-638-309-
11
[BD BOARD] - C

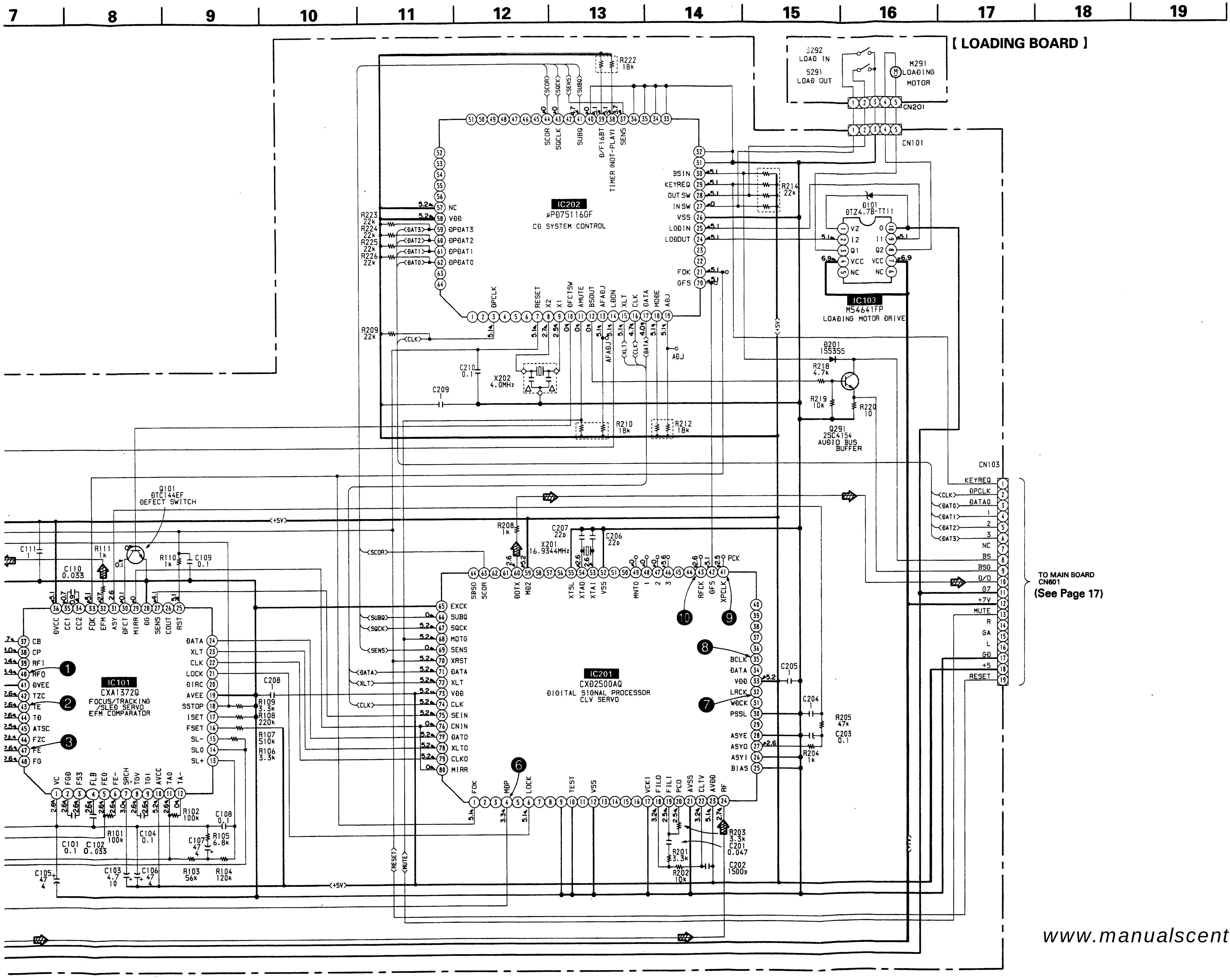
PRINTED WIRING BOARDS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

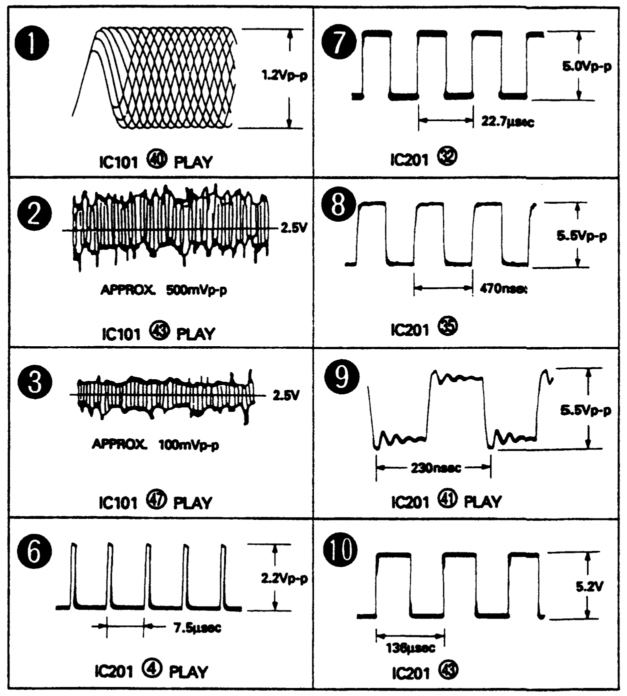

[MAIN BOARD]
DIGITAL OUT OPTICAL
SYSTEM CONTROL 2
CN501
D510
R512
CN502
IC502
C522
CN701
1-638-264-
11
19
[TRANSFORMER BOARD]
D505
T501 POWER TRANSFORMER
CN501
IC502
D503
1-638-266-
11
[LOADING BOARD]
CN201
S291 LOAD OUT
S292 LOAD IN
M291 LOADING MOTOR
1-638-308-
11
FL401 FLUORESCENT INDICATOR TUBE
10G
9G
7G
5G
4G
3G
2G
1G
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
8G
6G
F1 F1 1G 2G 3G 4G 5G 6G 7G 8G 9G 10G P12 P11 P10 P9 P8 P7 P6 P5 P4 P3 P2 P1 F2 F2
1 2 4 5 10 13 17 20 25 28 30 31
[DISPLAY BOARD]
S407
CHECK
S406
EDIT
D402
FL401
IC401
D403
S403
S404
CN401
D407
S401
S402
S405
OPEN/CLOSE
1-638-265-
11
[BD BOARD] – CONDUCTOR SIDE –
X202
C103
DRIVER GND
M102 SLED MOTOR
W101 LIMIT
M101 SPINDLE MOTOR
1-638-309-
11
[BD BOARD] – COMPONENT SIDE –
1-638-309-
11
OPTICAL PICK-UP BLOCK (KSS-240A)

3-4. SCHEMATIC DIAGRAM - BD SECTION -


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
OPTICAL PICK UP BLOCK KSS-240A ⚠
FOCUS COIL
TRACKING COIL
[BD BOARD]
CN102
IC102
LA6525M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
IC101
CXA1372Q
FOCUS/TRACKING
/SLED SERVO
EFM COMPARATOR
IC202
µPD75116GF
CD SYSTEM CONTROL
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
Q101
DTC144EF
DEFECT SWITCH
S101
LIMIT
SWITCH
M102
SLED
MOTOR
M101
SPINDLE
MOTOR
RV101
10k
TRACKING
GAIN
RV102
10k
FOCUS
GAIN
X201
16.9344MHz
X202
4.0MHz
S292
LOAD IN
S291
LOAD OUT
D101
DTZ4.7B
IC103
M54641
LOADING MOTOR
D201
1SS355
Q291
2SC4154
AUDIO BUS
BUFFER
R222
18k
R214
22k
R223
22k
R224
22k
R225
22k
R226
22k
R209
22k
R210
18k
R212
18k
R218
4.7k
R219
10k
R208
1k
C207
22p
C206
22p
C209
1
C210
0.1
R205
47k
C203
0.1
R204
1k
C204
I205
1
R203
3.3k
C201
0.047
C202
1500p
R201
3.3k
R202
10k
C111
1
R111
1k
R110
1k
C109
0.1
C110
0.033
C112
0.01
C113
0.01
C114
2200p
C115
2200p
C117
0.1
R114
220k
C120
0.033
C118
0.1
R112
27k
R113
8.2k
C119
2200p
C154
2200p
R157
18k
C153 560p
R154
33k
C155
0.015
R156
22k
R152
10k
R153
33k
R155
68k
C151
6800p
C152
1
C208
1
R109
3.3k
R108
220k
R107
510k
R106
3.3k
R102
100k
C108
0.1
R105
6.8k
C107
47
4
R101
100k
C101
0.1
C102
0.033
C104
0.1
C103
4.7
10
C106
47
4
R103
56k
R104
120k
C105
47
4
R160
1k
R159
18k
C174
0.1
C173
0.1
R174
10
R173
10
R172
10
R171
10
C172
0.1
C171
0.1
+5V
+7V
RESET
MUTE
SCOR
SUBQ
SQCK
SENS
DATA
XLT
CLK
TEO
FEO
FEI
FES
TEI
TES
VC
ADJ
PCK
RFCK
GFS
XPCLK
BCLK
DATA
VDD
LRCK
WDCK
PSSL
ASYE
ASYO
ASYI
BIAS
EXCK
SUBQ
SQCK
MDTG
SENS
XRST
DATA
XLT
VDD
CLK
SEIN
CNIN
DATO
XLTO
CLKO
MIRR
FOK
MDP
LOCK
TEST
VSS
VCKI
FILO
FILI
PCO
AVSS
CLTV
AVDD
RF
SBSO
SCOR
DOTX
MD2
XTSL
XTAO
XTAI
VSS
MNT0
MNT1
MNT2
MNT3
NC
VDD
DPDAT3
DPDAT2
DPDAT1
DPDAT0
DPCLK
RESET
X2
X1
DFCTSW
AMUTE
BSOUT
AFADJ
LDON
XLT
CLK
DATA
MODE
ADJ
BSIN
KEYREQ
OUTSW
INSW
VSS
LODIN
LODOUT
FOK
GFS
SCOR
SQCLK
SUBQ
D/F16BT
TIMER (NOT-PLAY)
SENS
DVCC
CC1
CC2
FOK
EFM
ASY
DFCT
MIRR
DG
SENS
COUT
RST
CB
CP
RFI
RFO
DVEE
TZC
TE
TD
ATSC
FZC
FE
FG
VC
FGD
FS3
FLB
FEO
FE-
SRCH
TGV
TGI
AVCC
TAO
TA-
DATA
XLT
CLK
LOCK
DIRC
AVEE
SSTOP
ISET
FSET
SL-
SLO
SL+
VCC
LDON
G
FB
VREF
RF-
RFO
FBO
FA-
FA+
FZC
FE
LD
PD
AO
BO
CO
DO
EO
FO
F-
VR
VC
TE
F-
T+
T-
F+
LDON
VCC
G
RFO
FZC
FE
TE
VC
SW
RESET
❶
❷
❸
❻
❼
❽
❾
❿


7
8
9
10
11
12
13
14
15
16
17
18
19
[LOADING BOARD]
S292 LOAD IN
S291 LOAD OUT
M291 LOADING MOTOR
CN201
CN101
IC202
µPD75116GF
CD SYSTEM CONTROL
R222 18k
R223 22k
R224 22k
R225 22k
R226 22k
R209 22k
R214 22k
D101 DTZ4.7B-TT11
IC103
M54641FP
LOADING MOTOR DRIVE
D201 1SS355
R218 4.7k
R219 10k
R220 10
Q291 2SC4154 AUDIO BUS BUFFER
C210 0.1
X202 4.0MHz
C209 1
R210 18k
R212 18k
ADJ
CN103
KEYREQ
DPCLK
DATAO
NC
BS
BSG
D/O
G7
+7V
MUTE
R
GA
L
GD
+5
RESET
TO MAIN BOARD CN601
(See Page 17)
Q101 DTC144EF DEFECT SWITCH
R111 1k
R110 1k
C109 0.1
C111 1
C110 0.033
IC101
CXA1372Q
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR
R208 1k
C207 22p
X201 16.9344MHz
C206 22p
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR CLV SERVO
C208 1
R109 3.3k
R108 220k
R107 510k
R106 3.3k
C205 1
C204 1
R205 47k
C203 0.1
R204 1k
R203 3.3k
C201 0.047
R201 3.3k
R202 10k
C202 1500p
R102 100k
C108 0.1
R101 100k
C104 0.1
C107 47
R105 6.8k
C101 0.1
C102 0.033
C105 47 4
C103 4.7 10
C106 47 4
R103 56k
R104 120k
(+5V)
PCK
1
2
3
6
7
8
9
10

• WAVEFORMS



Note:

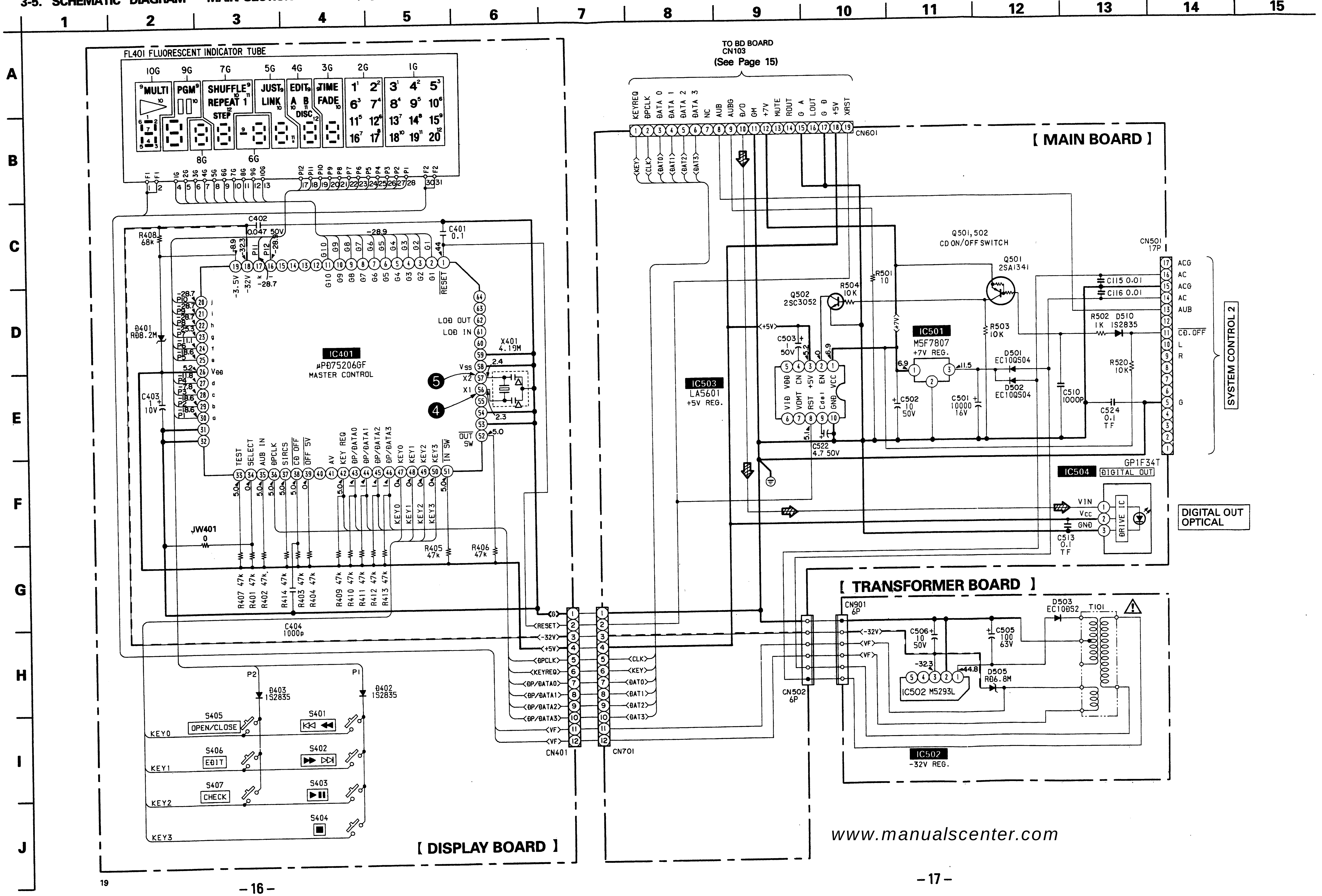
- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : internal component.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

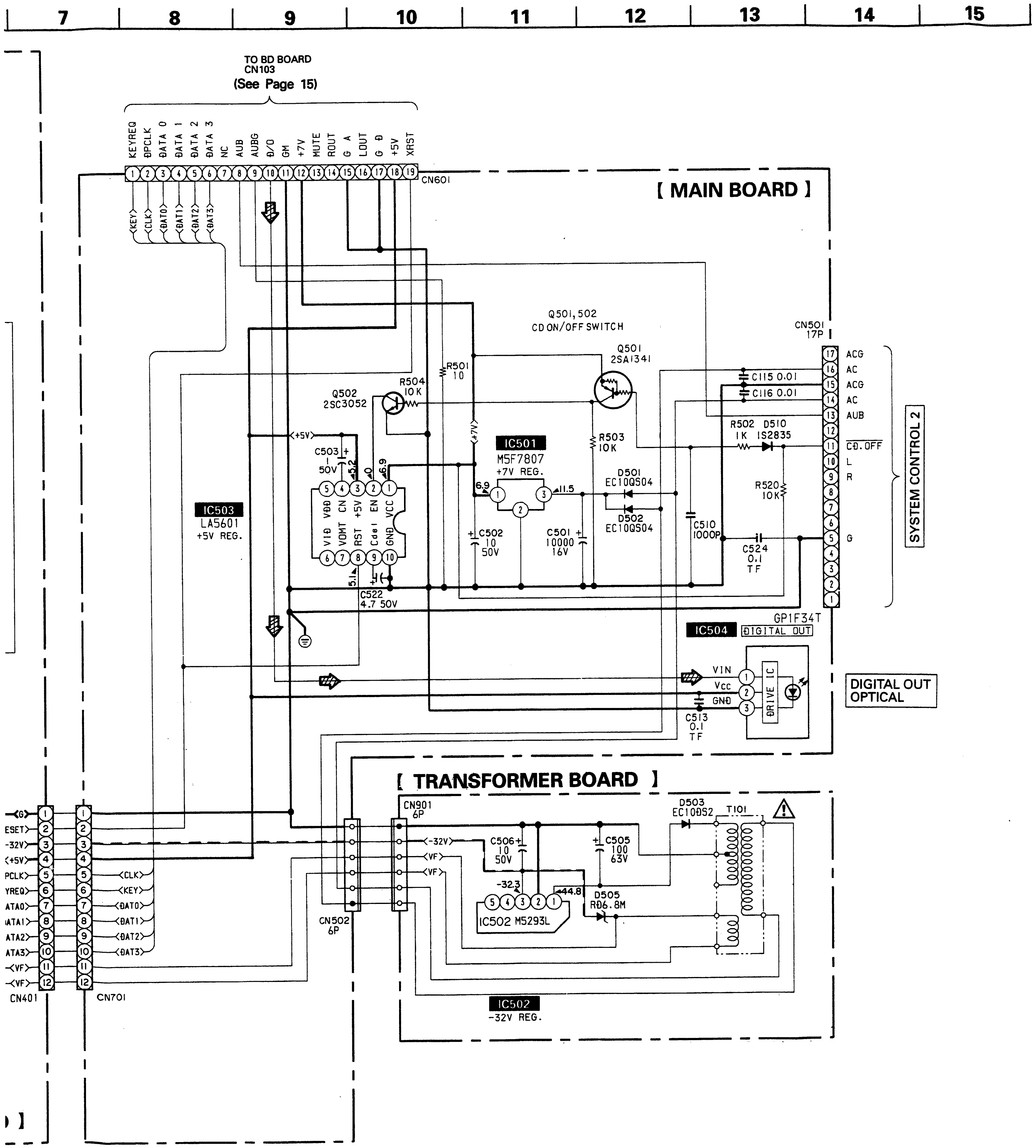
- ▬▬: B + Line.
- ▪▪▪▪: B – Line.
- ☐: adjustment for repair.
- Voltages are DC between measurement points and ground.
- no mark : PLAY
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path
  ▨: CD

3-5. SCHEMATIC DIAGRAM - MAIN SECTION -

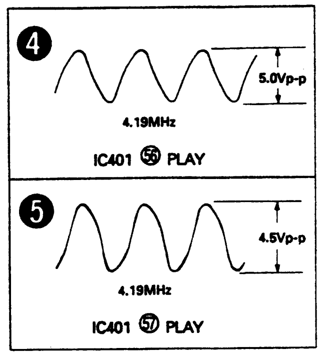
• See page 15 for note.


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J
FL401 FLUORESCENT INDICATOR TUBE
10G 9G 7G 5G 4G 3G 2G 1G 8G 6G
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
IC401
μPD75206GF
MASTER CONTROL
C402 0.047 50V
C401 0.1
R408 68k
D401 RD8.2M
C403 1 10V
X401 4.19M
LOD OUT
LOD IN
Vss
X2
X1
OUT SW
RESET
TEST
SELECT
AUB IN
DPCLK
SIRCS
CD OFF
OFF 5V
AV
KEY REQ
DP/DATA0
DP/DATA1
DP/DATA2
DP/DATA3
KEY0
KEY1
KEY2
KEY3
IN SW
JW401 0
R405 47k
R406 47k
R407 47k
R401 47k
R402 47k
R414 47k
R403 47k
R404 47k
R409 47k
R410 47k
R411 47k
R412 47k
R413 47k
C404 1000p
P2
P1
D403 1S2835
D402 1S2835
S405 OPEN/CLOSE
S401
S406 EDIT
S402
S407 CHECK
S403
S404
KEY0
KEY1
KEY2
KEY3
[DISPLAY BOARD]
CN401
CN701
G
RESET
-32V
+5V
DPCLK
KEYREQ
DP/DATA0
DP/DATA1
DP/DATA2
DP/DATA3
VF
VF
CLK
KEY
DATA0
DATA1
DATA2
DATA3
TO BD BOARD CN103 (See Page 15)
KEYREQ DPCLK DATA 0 DATA 1 DATA 2 DATA 3 NC AUB AUBG D/O GM +7V MUTE ROUT G A LOUT G D +5V XRST
CN601
[MAIN BOARD]
Q501,502 CD ON/OFF SWITCH
Q501 2SA1341
Q502 2SC3052
R504 10K
R501 10
R503 10K
IC501 M5F7807 +7V REG.
D501 EC10QS04
D502 EC10QS04
C501 10000 16V
C502 10 50V
C503 1 50V
IC503 LA5601 +5V REG.
VID VDD VOMT CN RST +5V Cdel EN VCC GND
C522 4.7 50V
C510 1000P
C524 0.1 TF
C115 0.01
C116 0.01
R502 1K
D510 1S2835
R520 10K
CN501 17P
ACG AC ACG AC AUB CD.OFF L R G
SYSTEM CONTROL 2
IC504 GP1F34T DIGITAL OUT
VIN Vcc GND
DRIVE IC
C513 0.1 TF
DIGITAL OUT OPTICAL
[TRANSFORMER BOARD]
CN901 6P
CN502 6P
-32V VF VF
C506 10 50V
C505 100 63V
D503 EC10QS2
T101
D505 RD6.8M
IC502 M5293L
IC502 -32V REG.
⑤
④

www.manualscenter.com

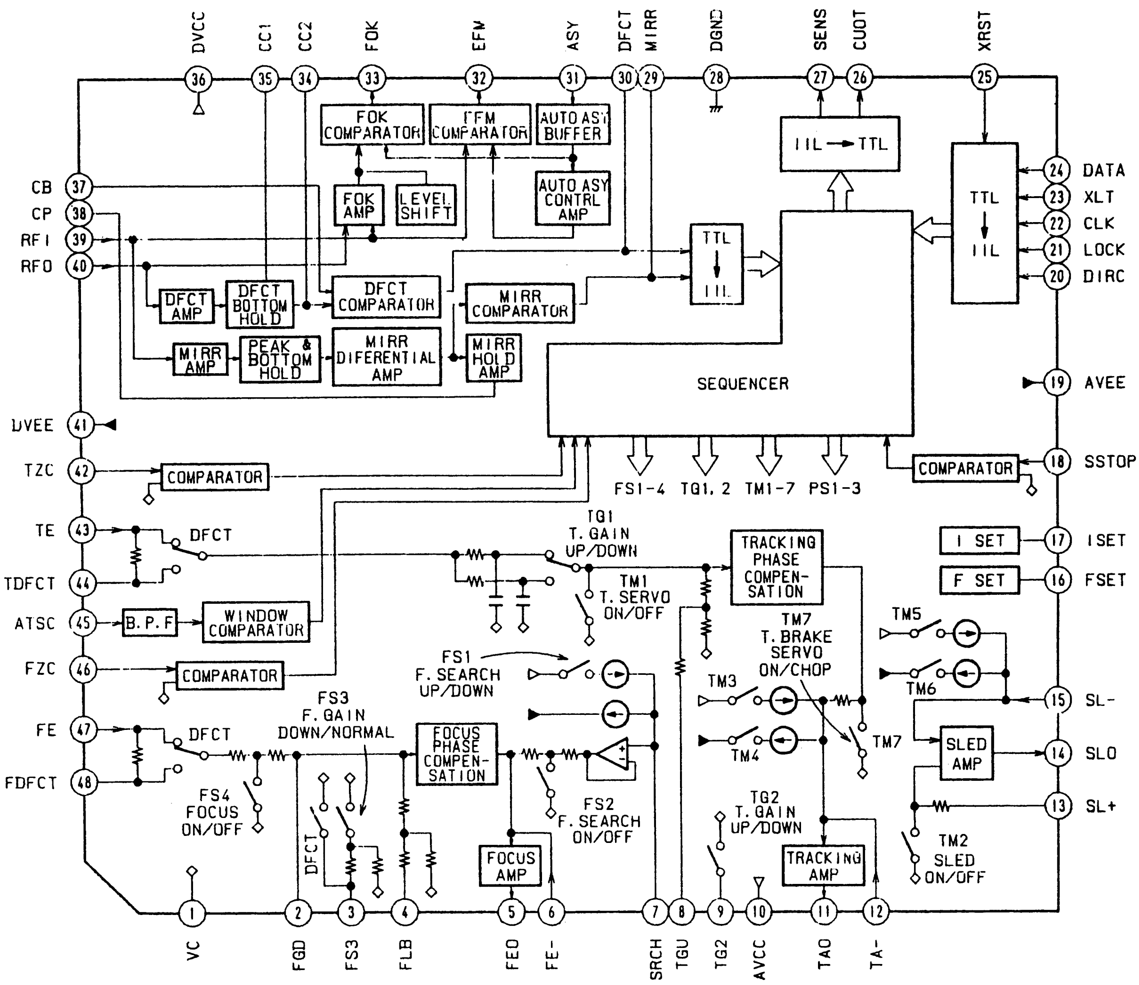

7
8
9
10
11
12
13
14
15
TO BD BOARD
CN103
(See Page 15)
KEYREQ
ĐPCLK
ĐATA 0
ĐATA 1
ĐATA 2
ĐATA 3
NC
AUB
AUBG
Đ/O
GM
+7V
MUTE
ROUT
G A
LOUT
G Đ
+5V
XRST
CN601
[MAIN BOARD]
<KEY>
<CLK>
<ĐATO>
<ĐAT1>
<ĐAT2>
<ĐAT3>
Q501,502
CD ON/OFF SWITCH
Q501
2SA1341
Q502
2SC3052
R504
10K
R501
10
<+5V>
<+7V>
C503
1
50V
IC501
M5F7807
+7V REG.
R503
10K
D501
EC10QS04
D502
EC10QS04
IC503
LA5601
+5V REG.
VIĐ
VĐĐ
VOMT
CN
RST
+5V
Cdel
EN
GNĐ
VCC
6.9
11.5
5.2
0
6.9
5.1
C502
10
50V
C501
10000
16V
C510
1000P
C522
4.7 50V
CN501
17P
C115 0.01
C116 0.01
R502
1K
D510
1S2835
R520
10K
C524
0.1
TF
ACG
AC
ACG
AC
AUB
CĐ.OFF
L
R
G
SYSTEM CONTROL 2
GP1F34T
IC504
ĐIGITAL OUT
VIN
Vcc
GNĐ
ĐRIVE IC
C513
0.1
TF
DIGITAL OUT
OPTICAL
[TRANSFORMER BOARD]
CN901
6P
<-32V>
<VF>
<VF>
C506
10
50V
C505
100
63V
D503
EC10DS2
T101
-32.3
-44.8
D505
RĐ6.8M
IC502 M5293L
CN502
6P
IC502
-32V REG.
<G>
ESET>
-32V>
<+5V>
PCLK>
YREQ>
ATA0>
ATA1>
ATA2>
ATA3>
<VF>
<VF>
CN401
<CLK>
<KEY>
<ĐAT0>
<ĐAT1>
<ĐAT2>
<ĐAT3>
CN701
)]

- **WAVEFORMS**


❹
5.0Vp-p
4.19MHz
IC401 ㊺ PLAY
❺
4.5Vp-p
4.19MHz
IC401 ㊼ PLAY

3-6. IC BLOCK DIAGRAMS

IC101 CXA1372Q


DVCC
CC1
CC2
FOK
EFM
ASY
DFCT
MIRR
DGND
SENS
CUOT
XRST
36
35
34
33
32
31
30
29
28
27
26
25
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
IIL → TTL
FOK AMP
LEVEL SHIFT
AUTO ASY CONTRL AMP
TTL ↓ IIL
24 DATA
23 XLT
22 CLK
21 LOCK
20 DIRC
CB 37
CP 38
RFI 39
RFO 40
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
TTL ↓ IIL
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
19 AVEE
DVEE 41
TZC 42
COMPARATOR
FS1-4 TG1, 2 TM1-7 PS1-3
COMPARATOR
18 SSTOP
TE 43
DFCT
TG1 T. GAIN UP/DOWN
TRACKING PHASE COMPEN-SATION
I SET
17 ISET
TDFCT 44
TM1 T. SERVO ON/OFF
F SET
16 FSET
ATSC 45
B.P.F
WINDOW COMPARATOR
TM7 T. BRAKE SERVO ON/CHOP
TM5
FZC 46
COMPARATOR
FS1 F. SEARCH UP/DOWN
TM3
TM6
15 SL-
FS3 F. GAIN DOWN/NORMAL
FE 47
DFCT
FOCUS PHASE COMPEN-SATION
TM7
SLED AMP
14 SLO
FDFCT 48
TM4
FS4 FOCUS ON/OFF
FS2 F. SEARCH ON/OFF
TG2 T. GAIN UP/DOWN
13 SL+
DFCT
FOCUS AMP
TRACKING AMP
TM2 SLED ON/OFF
1 VC
2 FGD
3 FS3
4 FLB
5 FEO
6 FE-
7 SRCH
8 TGU
9 TG2
10 AVCC
11 TAO
12 TA-

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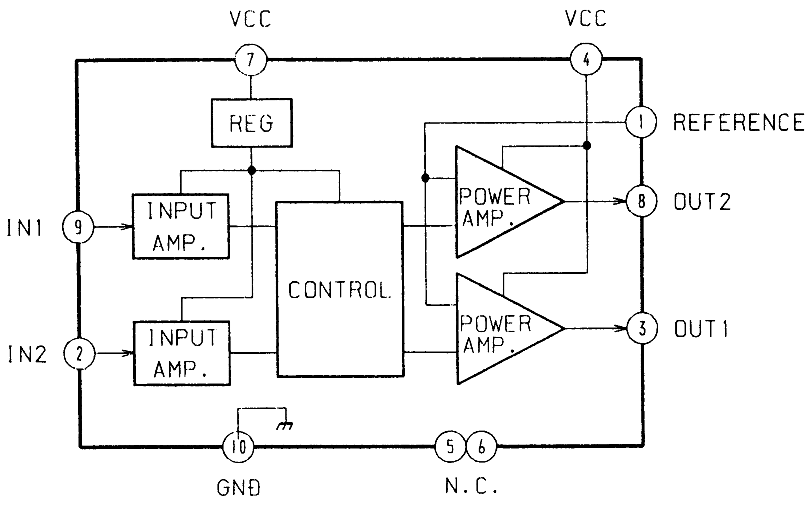
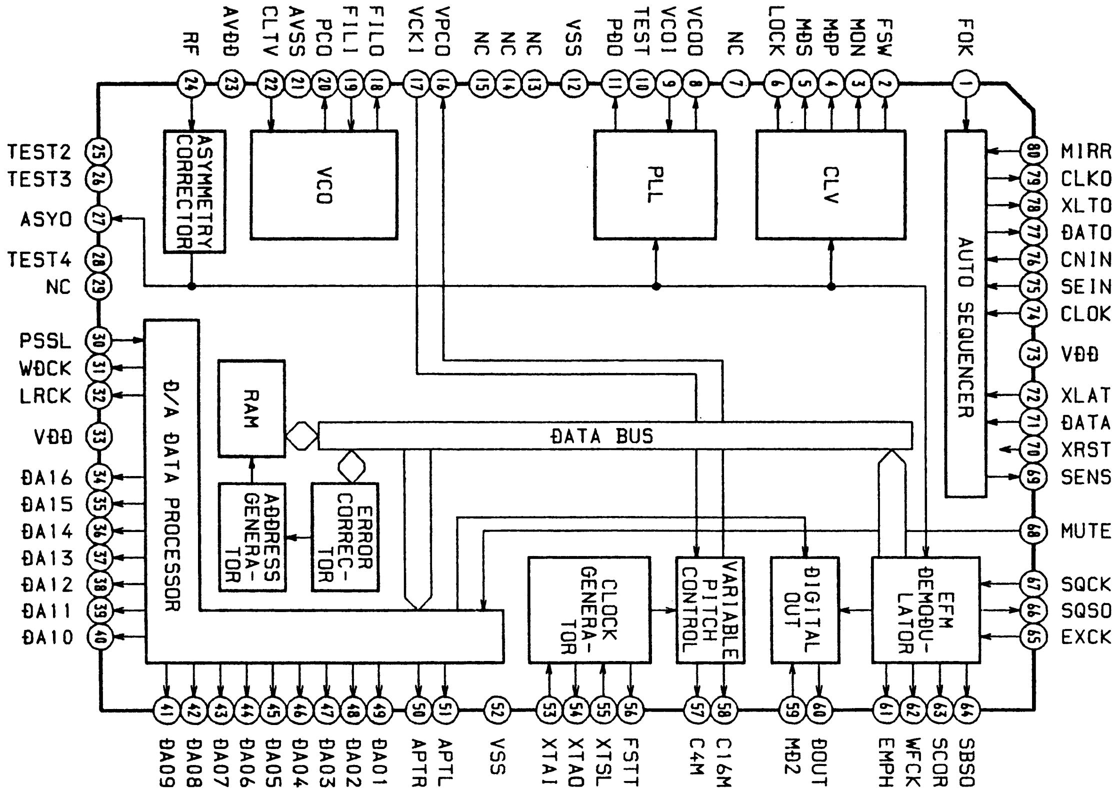
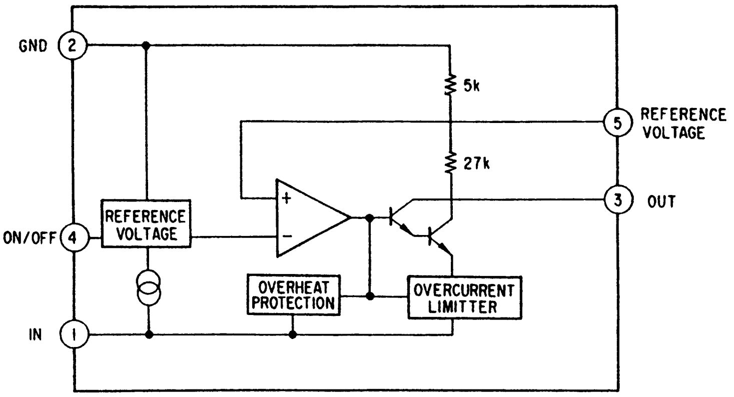
IC103 M54641FP


VCC
7
VCC
4
REG
1 REFERENCE
POWER AMP.
8 OUT2
IN1 9
INPUT AMP.
CONTROL
POWER AMP.
3 OUT1
IN2 2
INPUT AMP.
10
GND
5 6
N.C.

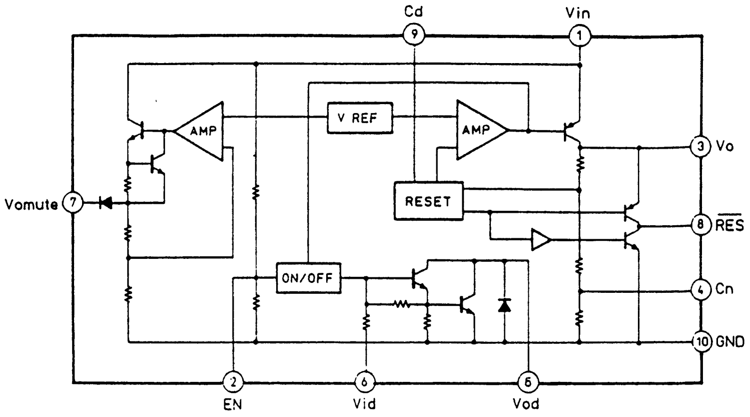
IC201 CXD2500AQ


1 FOK
2 FSW
3 MON
4 MDP
5 MDS
6 LOCK
7 NC
8 VCOO
9 VCOI
10 TEST
11 PDO
12 VSS
13 NC
14 NC
15 NC
16 VPCO
17 VCKI
18 FILO
19 FILI
20 PCO
21 AVSS
22 CLTV
23 AVDD
24 RF
25 TEST2
26 TEST3
27 ASYO
28 TEST4
29 NC
30 PSSL
31 WDCK
32 LRCK
33 VDD
34 DA16
35 DA15
36 DA14
37 DA13
38 DA12
39 DA11
40 DA10
41 DA09
42 DA08
43 DA07
44 DA06
45 DA05
46 DA04
47 DA03
48 DA02
49 DA01
50 APTR
51 APTL
52 VSS
53 XTAI
54 XTAO
55 XTSL
56 FSTT
57 C4M
58 C16M
59 MD2
60 DOUT
61 EMPH
62 WFCK
63 SCOR
64 SBSO
65 EXCK
66 SQSO
67 SQCK
68 MUTE
69 SENS
70 XRST
71 DATA
72 XLAT
73 VDD
74 CLOK
75 SEIN
76 CNIN
77 DATO
78 XLTO
79 CLKO
80 MIRR
ASYMMETRY CORRECTOR
VCO
PLL
CLV
AUTO SEQUENCER
D/A DATA PROCESSOR
RAM
DATA BUS
ADDRESS GENERATOR
ERROR CORRECTOR
CLOCK GENERATOR
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODULATOR

IC502 M5293L


GND 2
5k
27k
5 REFERENCE VOLTAGE
3 OUT
+
−
REFERENCE VOLTAGE
ON/OFF 4
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN 1

IC503 LA5601


Cd 9
Vin 1
AMP
V REF
AMP
3 Vo
Vomute 7
RESET
8 RES
ON/OFF
4 Cn
10 GND
2 EN
6 Vid
6 Vod

3-7. PIN FUNCTION OF IC202 AND IC401

- **IC202 CD System Controller (μPD75116GF-760-3BE)**

Functions effected by the captioned controller include IC101 (RF signal processing servo) and IC201 (DSP digital filter) loading control in the CD unit, data exchange with IC401 (master controller), audio bus entry, etc.

Pin No.	Pin Name	I/O	Description
1-2		O	Not in use with the model (open).
3	DPCLK	O	Display data transfer clock output to IC401 (display micon)
4-6		O	Not in use with the model (open)
7	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
8	X2	I	Clock input
9	X1	I	Clock input (4 MHz)
10	DPCF SW	O	DEFECT circuit ON/OFF switching output of IC101 (CXA1372Q). It is turned OFF ("H") to focus-search the DISK flaw detection circuit.
11	AMUTE	O	Muting control output. "H": Mute
12	BSOUT	O	Audio bus output
13	AFADJ	I	Test mode input. Various test operations are effected upon "L" after turning ON the POWER.
14	LDON	O	Optical pickup laser diode ON/OFF switching output. "H": ON
15	XLT	O	Serial data latch output to IC201 (CXD2500AQ)
16	CLK	O	Serial data transfer clock output to IC201 (CXD2500AQ)
17	DATA	O	Serial data output to IC201 (CXD2500AQ)
18	MODE	I	Not in use with the model (GND)
19	ADJ	I	Test mode input. Upon "L," GFS checking is disabled while continuously rotating the spindle no matter whether frame synch is issued during PLAY, PAUSE or SEARCH.
20	GFS	I	GFS signal input from IC201 (CXD2500AQ). "L": NG "H": OK
21	FOK	I	Focus OK signal input from IC101 (CXA1372Q). "H": OK
22 - 23		O	Not in use with the model (open)
24	LODOUT	O	Output to rotate M291 (loading motor) in the loading out direction. *1
25	LODIN	O	Output to rotate M291 (loading motor) in the loading in direction. *1
26	V_{SS}	–	Power terminal (GND)
27	$\overline{\text{IN SW}}$	I	S292 (Loading in switch) input
28	$\overline{\text{OUT SW}}$	I	S291 (Loading out switch) input
29	KEY REQ	I	Key data request input from IC401 (display micon)
30	BS IN	I	Audio bus input
31 - 36			Not in use with the model (GND)
37	$\overline{\text{SENS}}$	I	SENS input from IC101 (CXA1372Q) and IC201 (CXD2500AQ)
38	$\overline{\text{TIMER}}$	I	Not in use with the model (pull up)
39	D/F 16BIT	I I	IC201 (CXD2500AQ) digital filter mode setting input. It is fixed at 16 bit, 4Fs with the model (pull up).
40			Not in use with the model (GND)
41	SUBQ	I	Subcode Q data input from IC201 (CXD2500AQ)
42		O	Not in use with the model (open)
43	SQCLK	O	Subcode Q data reading clock output to IC201 (CXD2500AQ)
44	SCOR	I	Subcode synch S0 + S1 detection input from IC201 (CXD2500AQ)
45 - 56		O	Not in use with the model (open)
57	N.C.	I	Not in use with the model (+5V)
58	V_{DD}	–	Power terminal (+5V)
59 - 62	DPDATA3-0	I/O	Key data input and display data output with IC401 (display micon)
63 - 64		O	Not in use with the model (open)

*1 Loading motor control

	IN	OUT	BRAKE
LODOUT ㉔	L	H	H
LODIN ㉕	H	L	H

- **IC401 Display controller (μPD75206GF-716-3BE)**

In charge of displaying the FL tube and keying in, it exchanges data with the IC202 (CD syscon) in 4-bit parallel mode.

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
2 - 11	G1-10	O	Digital output to the FL tube
12 - 15		O	Not in use with the model (open)
16, 17	l, k	O	FL tube segment output
18	VLOAD	–	Power supply for the FL tube controller (builtin) (-32V)
19	VPRE	–	Power supply for the FL tube predriver (-3.5V)
20 - 25	j - e	O	FL tube segment output
26	VDD	–	Power terminal (+5V)
27, 28	d, c	O	FL tube segment output
29, 30	b, a	O	FL tube segment, key scan output
31, 32		I	Not in use with the model (GND)
33	$\overline{\text{TEST}}$	I	Test mode input. "L": Test mode
34	SELECT	I	Not in use with the model (pull up)
35	BSIN	I	Not in use with the model (pull up)
36	DPCLK	I	Display data transfer clock input from IC202 (CD syscon)
37, 38		I	Not in use with the model (pull up)
39		O	Not in use with the model (pull up)
40, 41		O	Not in use with the model (open)
42	KEY REQ	O	Key data request output to IC202 (CD syscon)
43 - 46	DPDATA0-3	I/O	Key data output and display data input with IC202 (CD syscon)
47 - 50	KEY0-3	I	Key data input
51, 52		I	Not in use with the model (pull up)
53, 54		I	Not in use with the model (GND)
55		O	Not in use with the model (open)
56	X1	I	System clock input (4.19 MHz)
57	X2	I	System clock input
58	Vss	–	Power supply terminal (GND)
59		I	Not in use with the model (GND)
60 - 64		O	Not in use with the model (open)

SECTION 4
EXPLODED VIEWS

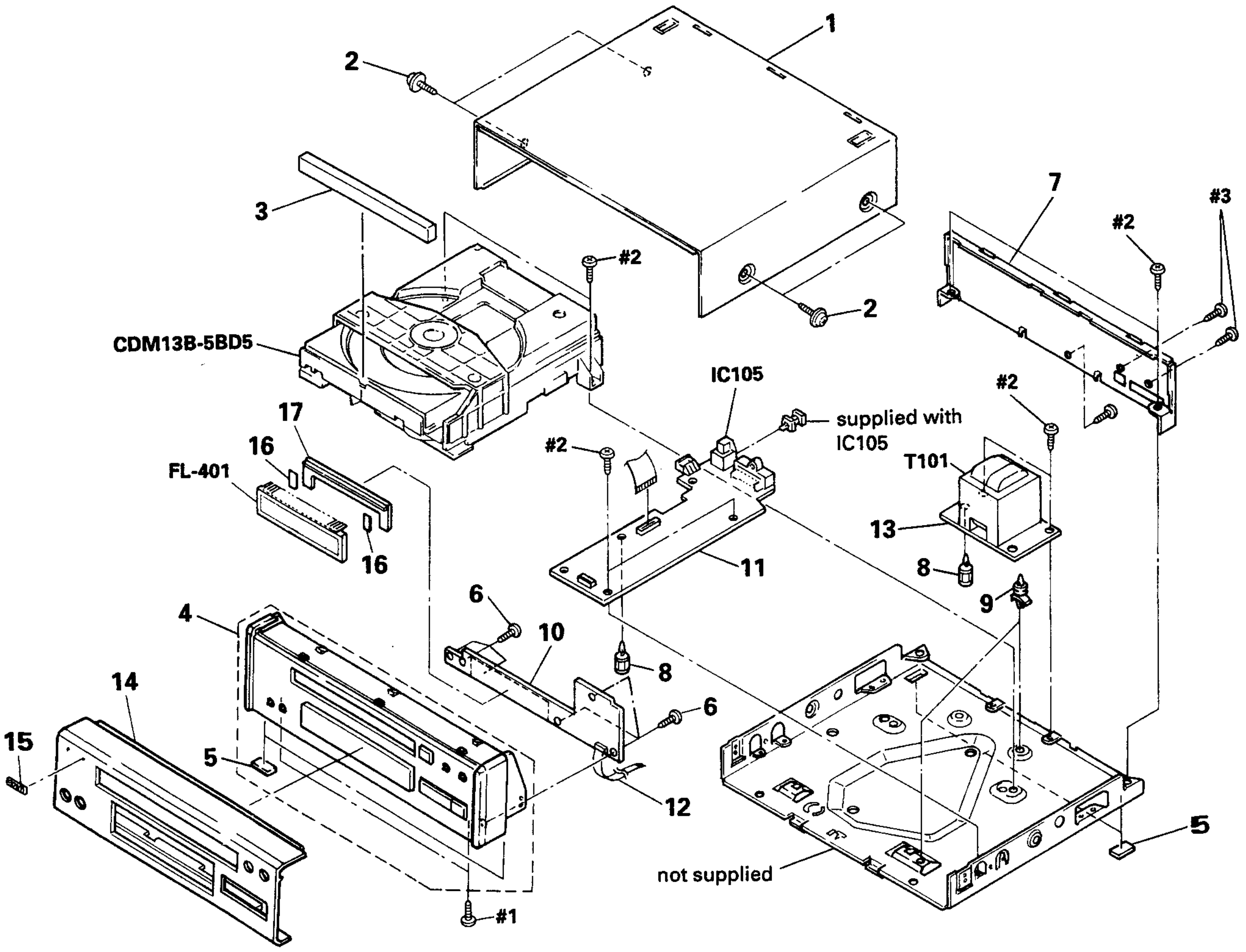
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

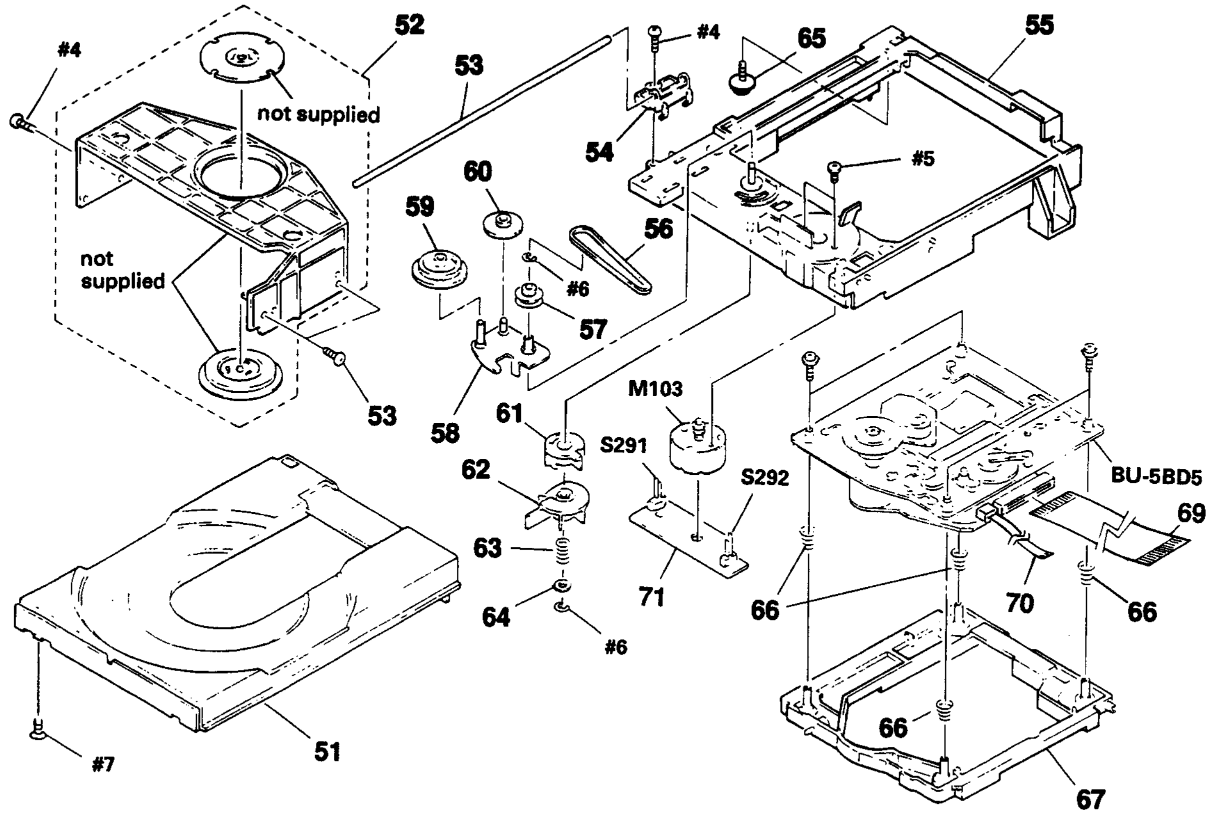
When indicating parts by reference number, please include the board name.

(1) CHASSIS SECTION



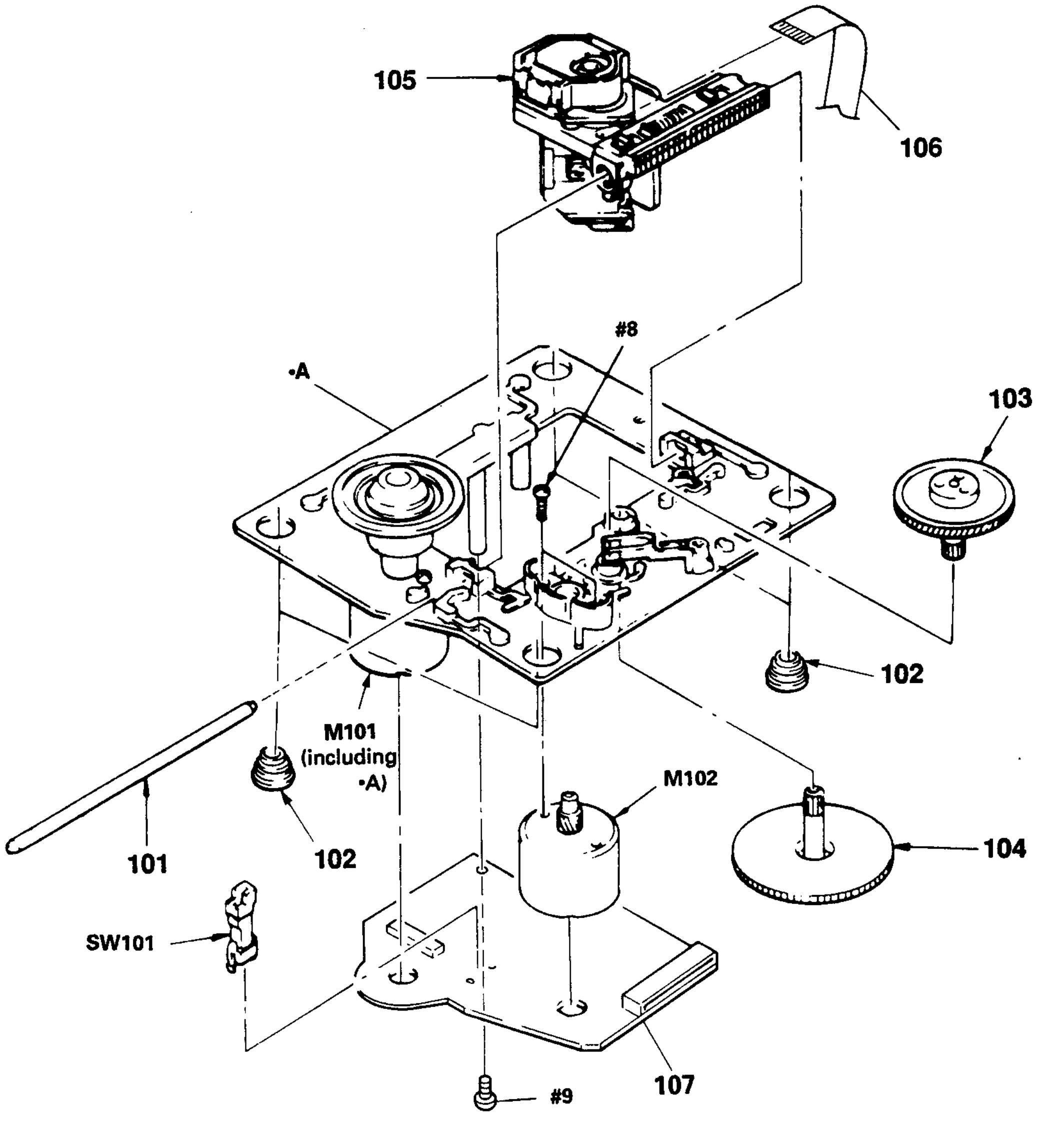
Ref. No.	Part No.	Description	Remarks
1	4-932-844-01	CASE	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4941-527-1	LID (TRAY) ASSY	
4	X-4941-525-1	PANEL ASSY, FRONT	
5	4-930-336-01	FOOT (FELT)	
6	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
7	* 4-943-175-11	PAENL, BACK	
8	* 3-669-610-00	SPACER	
9	* 4-924-098-11	HOLDER, PC BOARD	
10	* A-4617-802-A	DISPLAY BOARD, COMPLETE	
11	* 1-638-264-11	MAIN BOARD	
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	* 1-638-266-11	TRANSFORMER BOARD	
14	4-944-445-01	PANEL, FRONT	
15	4-942-636-01	EMBLEM (NO.3.5), SONY	
16	* 4-932-810-11	CUSHION (FL)	
17	* 4-944-444-01	HOLDER (FL TUBE)	
T101	⚠ 1-450-341-11	TRANSFORMER, POWER	

(2) CD MECHANISM SECTION (CDM13B-5BD5)


#4
52
not supplied
53
not supplied
53
60
59
56
#6
57
58
61
62
63
64
#6
#4
65
55
54
#5
M103
S291
S292
71
BU-5BD5
69
66
70
66
66
67
51
#7

Ref. No.	Part No.	Description	Remarks
51	4-944-012-01	TABLE, DISC	
52	A-4604-752-A	HOLDER (MG) ASSY	
53	4-929-764-01	SHAFT (TABLE GUIDE)	
54	4-944-006-01	BEARING	
55	X-4941-462-1	CHASSIS (MD) ASSY	
56	4-927-649-01	BELT	
57	4-929-724-01	PULLEY (B)	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-11	GEAR (P)	
60	4-927-628-01	GEAR (C)	
61	4-929-727-01	CAM (A)	
62	4-929-729-01	CAM (B)	
63	3-659-338-00	SPRING, COMPRESSION	
64	4-927-654-01	WASHER (LIMITER)	
65	* 4-917-583-21	BRACKET, YOKE	
66	4-917-541-01	SPRING (B)	
67	4-929-747-01	HOLDER (BU)	
68	4-933-134-01	SCREW (+PTPWH M2.6X6)	
69	1-590-909-21	WIRE, FLAT TYPE (19 CORE)	
70	1-590-530-11	WIRE, FLAT TYPE	
71	* 1-638-308-11	LOADING BOARD	
M103	A-4608-362-A	MOTOR (L) ASSY	

(3) OPTICAL PICK-UP BLOCK (BU-5BD5)


105
106
#8
•A
103
102
M101 (including •A)
M102
104
101
102
SW101
107
#9

Ref. No.	Part No.	Description	Remarks
101	4-917-565-01	SHAFT, SLED	
102	4-933-126-01	INSULATOR (A)	
103	4-917-567-01	GEAR (M)	
104	4-917-564-01	GEAR (P), FLATNESS	
105	⚠ 8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
107	* A-4617-762-A	BD BOARD, COMPLETE	
M101	X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102	X-4917-504-1	ASSY, MOTOR (SLED)	
SW101	1-572-085-11	SWITCH, LEAF (LIMIT)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 5
ELECTRICAL PARTS LIST

BD

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF :μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remarks
	* A-4617-762-A	BD BOARD, COMPLETE ******************			
		(CAPACITOR)			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-135-155-21	TANTALUM CHIP	4.7uF	10%	10V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-607-11	ELECT CHIP	47uF	20%	4V
C106	1-126-607-11	ELECT CHIP	47uF	20%	4V
C107	1-126-607-11	ELECT CHIP	47uF	20%	4V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C115	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C154	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C201	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C202	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C203	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C204	1-164-346-11	CERAMIC CHIP	1uF		16V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C207	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		(CONNECTOR)			
CN101	1-580-858-11	SOCKET, CONNECTOR (SMT) 5P			
CN102	1-580-866-11	SOCKET, CONNECTOR (SMT) 12P			
CN103	1-580-872-41	SOCKET, CONNECTOR (SMT) 19P			
		(DIODE)			
D101	8-719-976-96	DIODE DTZ4.7B			
D201	8-719-988-62	DIODE 1SS355			
		(IC)			
IC101	8-752-050-82	IC CXA1372Q			
IC102	8-759-823-48	IC LA6525M			
IC103	8-759-636-20	IC M54641FP			
IC201	8-752-337-26	IC CXD2500AQ			
IC202	8-759-153-16	IC uPD75116GF-760-3BE			
		(TRANSISTOR)			
Q101	8-729-805-45	TRANSISTOR 2SC3395			
Q201	8-729-602-21	TRANSISTOR 2SC4154-F			
		(RESISTOR)			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W

DISPLAY MAIN TRANSFORMER LOADING

Ref. No.	Part No.	Description	Remarks
		(IC)	
IC401	8-759-154-14	IC uPD75206GF-716-3BE	
IC501	8-759-604-86	IC M5F7807L	
IC502	8-759-633-42	IC M5293L	
IC503	8-759-821-93	IC LA5601	
IC504	8-749-922-39	IC GP1F34T	
		(JUMPER)	
JW401	1-216-295-00	METAL CHIP 0 5% 1/10W	
		(TRANSISTOR)	
Q501	8-729-805-69	TRANSISTOR 2SA1341	
Q502	8-729-620-06	TRANSISTOR 2SC3052EF	
		(RESISTOR)	
R401	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R402	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R403	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R404	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R405	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R406	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R407	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R408	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R409	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R410	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R411	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R412	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R413	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R501	1-216-001-00	METAL CHIP 10 5% 1/10W	
R502	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R503	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R504	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R520	1-249-429-11	CARBON 10K 5% 1/4W	
		(SWITCH)	
S401	1-572-184-11	SWITCH, KEYBOARD (◀◀ |◁◁)	
S402	1-572-184-11	SWITCH, KEYBOARD (▶▶ ▷▷|)	
S403	1-572-184-11	SWITCH, KEYBOARD (▷▯▯)	
S404	1-572-184-11	SWITCH, KEYBOARD (■)	
S405	1-572-184-11	SWITCH, KEYBOARD (OPEN/CLOSE ⏏)	
S406	1-572-184-11	SWITCH, KEYBOARD (EDIT)	
S407	1-572-184-11	SWITCH, KEYBOARD (CHECK)	
		(TRANSFORMER)	
T101	⚠ 1-450-341-11	TRANSFORMER, POWER	
		(CRYSTAL)	
X401	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

Ref. No.	Part No.	Description	Remarks
	* 1-638-308-11	LOADING BOARD	
		(CONNECTOR)	
CN201	1-580-918-11	HOUSING, CONNECTOR 5P	
		(SWITCH)	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	
		MISCELLANEOUS	
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
69	1-590-909-21	WIRE, FLAT TYPE (19 CORE)	
70	1-590-530-11	WIRE, FLAT TYPE	
105	⚠ 8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102	X-4917-504-1	ASSY, MOTOR (SLED)	
M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)	
		ACCESSORY & PACKING MATERIAL	
	4-920-941-01	SHEET (B), PROTECTION	
	* 4-941-548-01	LABEL, CLASS 1	
	* 4-945-079-01	CUSHION	
		HARDWARE LIST	
# 1	7-682-547-09	SCREW +BVTT 3X6 (S)	
# 2	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
# 4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
# 5	7-621-775-10	SCREW +B 2.6X4	
# 6	7-624-105-04	STOP RING 2.3, TYPE -E	
# 7	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT	
# 8	7-621-255-15	SCREW +P 2X3	
# 9	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#10	7-682-548-04	SCREW +BVTT 3X8 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Sony Corporation
Audio Group

BD DISPLAY MAIN TRANSFORMER

Ref. No.	Part No.	Description				Remarks
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R157	1-236-427-11	NETWORK, RES	18K			
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R171	1-216-001-00	METAL CHIP	10	5%	1/10W	
R172	1-216-001-00	METAL CHIP	10	5%	1/10W	
R173	1-216-001-00	METAL CHIP	10	5%	1/10W	
R174	1-216-001-00	METAL CHIP	10	5%	1/10W	
R201	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R204	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R205	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R208	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R209	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R210	1-236-427-11	NETWORK, RES	18K			
R212	1-236-427-11	NETWORK, RES	18K			
R214	1-239-039-11	NETWORK, RES	22K			
R218	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R219	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R220	1-216-001-00	METAL CHIP	10	5%	1/10W	
R222	1-236-427-11	NETWORK, RES	18K			
R223	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R224	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R225	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R226	1-216-081-00	METAL CHIP	22K	5%	1/10W	

〈 VARIABLE RESISTOR 〉

RV101	1-241-395-11	RES, ADJ, METAL GLAZE 10K
RV102	1-241-395-11	RES, ADJ, METAL GLAZE 10K

〈 SWITCH 〉

SW101	1-572-085-11	SWITCH, LEAF (LIMIT)

〈 CRYSTAL 〉

X201	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)
X202	1-579-216-11	VIBRATOR, CERAMIC (4MHz)

****

Ref. No.	Part No.	Description				Remarks
	* A-4617-802-A	DISPLAY BOARD, COMPLETE				
		***********************				
	* 1-638-264-11	MAIN BOARD				
		**********				
	* 1-638-266-11	TRANSFORMER BOARD				
		*****************				
	* 1-573-099-11	HOUSING, CONNECTOR 12P				
	* 4-880-403-11	HEAT SINK				
	* 4-932-810-11	CUSHION (FL)				

〈 CAPACITOR 〉

C115	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C116	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C401	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C402	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C403	1-164-346-11	CERAMIC CHIP	1uF		16V
C404	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C501	1-126-939-11	ELECT	10000uF	20%	16V
C502	1-124-907-11	ELECT	10uF	20%	50V
C503	1-124-903-11	ELECT	1uF	20%	50V
C504	1-164-346-11	CERAMIC CHIP	1uF		16V
C505	1-126-063-11	ELECT	100uF	20%	63V
C506	1-124-907-11	ELECT	10uF	20%	50V
C507	1-124-903-11	ELECT	1uF	20%	50V
C510	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C513	1-136-165-00	FILM	0.1uF	5%	50V
C521	1-126-176-11	ELECT	220uF	20%	10V
C522	1-124-927-11	ELECT	4.7uF	20%	50V
C524	1-136-165-00	FILM	0.1uF	5%	50V

〈 CONNECTOR 〉

CN401	* 1-573-098-11	HOUSING, CONNECTOR 12P
CN501	* 1-569-624-11	SOCKET, CONNECTOR 17P
CN502	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P
CN601	* 1-573-149-11	SOCKET, CONNECTOR 19P
CN901	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P

〈 DIODE 〉

D401	8-719-106-36	DIODE	RD8.2M-B3
D402	8-719-104-34	DIODE	1S2836
D403	8-719-104-34	DIODE	1S2836
D501	8-719-210-39	DIODE	EC10QS-04
D502	8-719-210-39	DIODE	EC10QS-04
D503	8-719-210-33	DIODE	EC10DS2
D505	8-719-106-17	DIODE	RD6.8M-B2
D510	8-719-104-34	DIODE	1S2836

〈 FLUORESCENT TUBE 〉

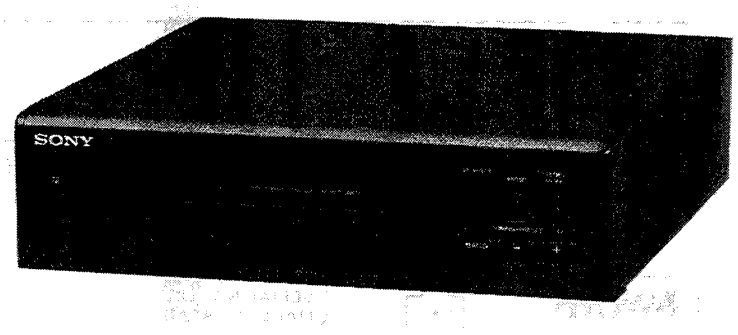
FL401	1-519-652-11	INDICATOR TUBE, FLUORESCENT

When indicating parts by reference number, please include the board name.

ST-H3600/H6600

SERVICE MANUAL

AEP Model
UK Model



ST-H3600 and ST-H6600 are the tuner section in MHC-2600/3600 and MHC-5600/6600 respectively.

Photo : ST-H6600

SPECIFICATIONS

System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 — 108 MHz
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	For AEP, UK models MW: 531 — 1,602 kHz LW: 153 — 279 kHz For Italian model MW: 522 — 1,611 kHz LW: 144 — 288 kHz
Antenna	AM loop antenna. External antenna terminals
Intermediate frequency	450 kHz

Note :
G : Germany model
IT : Italian model

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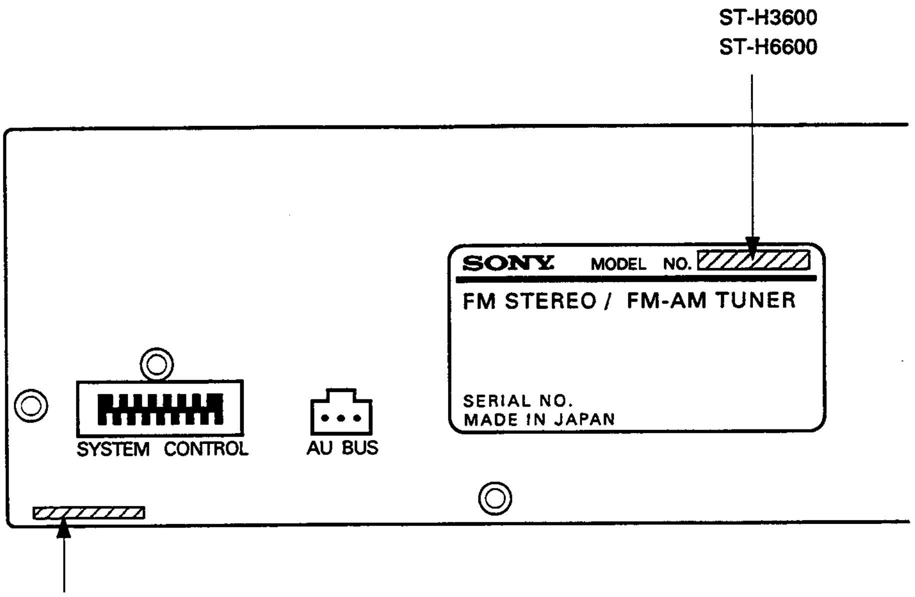
FM STEREO/FM-AM TUNER

SONY®

MODEL IDENTIFICATION

– BACK PANEL –


ST-H3600
ST-H6600
SONY
MODEL NO.
FM STEREO / FM-AM TUNER
SERIAL NO.
MADE IN JAPAN
SYSTEM CONTROL
AU BUS

4-942-893-51. AE.........ST-H3600 AEP,UK model
4-942-893-81. AE4.......ST-H3600 G model
4-942-893-91. IT...........ST-H3600 IT model

4-942-893-01. AE.........ST-H6600 AEP model
4-942-893-31. AE4.......ST-H6600 G model
4-942-893-41. IT...........ST-H6600 IT model

SECTION 1

SERVICING NOTES

SUPPLY OF POWER DURING SERVICES

Because the equipment is not provided with any power supply, it is operated with power supplied from the amplifier TA-H2600, H3600, H5600 or H6600 used in the series. The equipment requires the following 4 types of voltages. Therefore, connect the equipment to TA-H2600, H3600, H5600 or H6600 for services such as repairing with power supplied, because it will be too complicated to supply these voltages individually.

VOLTAGE	MAJOR CIRCUIT IN USE
AC 3.9V	FL tube filament voltage (VF)
DC -24V	Display controller IC701 grid voltage (VG)
DC -5.6V	Display controller IC701, Tuner PLL IC81 Vcc
DC 12V	Tuner RF, FM/AM DET IC21 Vcc

SERVICE MODE TO CHECK TIMER ON-OFF

It is possible to check whether the timer normally functions while being connected with an amplifier.

(1) Connect the equipment to the amplifier TA-H2600, H3600, H5600 or H6600 and set the POWER switch to STANDBY state.

(2) Set the time of the tuner to any time.

(3) Press 3 switches "BAND","-" and "MEMORY/NEXT" at the same time (while pressing "BAND" and "-" beforehand, finally press "MEMORY/NEXT")

(4) FL display tube

10 : 21

↓ 0.5 sec

10 : 22

↓ 0.5 sec

10 : 23

↓ 0.5 sec

10 : 24

↓ 0.5 sec → POWER ON

FUNCTION : TUNER
BAND : FM
FREQUENCY : Preset memory 1

↓ 3 sec → POWER OFF

00 : 00

(5) Completion

Note : After completion of the checking above, data preset in the memory IC702 is erased while resetting the memory to the following state upon shipping from the works, so be sure to recover the same frequency as that before the repairing.

- **Frequencies initially preset**

	AEP/UK model			G/IT model		
	FM	MW	LW	FM	MW	LW
1	87.5MHz	531KHz	153KHz	87.5MHz	522KHz	144KHz
2	88.0MHz	603KHz	162KHz	88.0MHz	603KHz	162KHz
3	98.0MHz	999KHz	216KHz	98.0MHz	999KHz	216KHz
4	100.0MHz	1404KHz	270KHz	100.0MHz	1404KHz	270KHz
5	108.0MHz	1602KHz	279KHz	108.0MHz	1611KHz	288KHz
6 - 20	*1	*2	*2	*1	*2	*2

*1 The same frequency values are set for the preset memory No.6 - No.10, No.11 - No.15 and No.16 - No.20 as for No.1 - No.5 respectively.

*2 The same frequency values are set for the preset menory No.6 -No.10 as for No.1 - No.5.

SERVICE MODE TO CHECK FL TUBE AND KEY INPUT

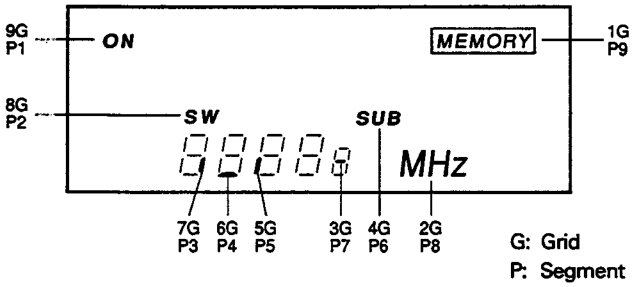
It is possible to check FL tube all ON grid, segment and key input.

(1) Connect the equipment to the amplifier TA-H2600, H3600, H5600 or H6600 and remove the AC cord of the amplifier out of the AC receptacle.

(2) While pressing 3 switches "BAND","-" and "MEMORY/NEXT" at the same time, insert the AC cord of the amplifier into the receptacle.

(3) Thus, all FL display tubes light up. By pressing "+" or "TIMER CONTROL" in this state, partial lighting or key input checking, respectively, is effected.

Partial lighting: Indicates the mode to check complete connection between the grid and segment of the FL tube. The condition is normal when the following indication is effected. By pressing "+" or "-" in the partial lighting mode, the status returns to key input checking or all ON in (3), respectively.



Key input checking: Shows the mode to check key input into 9 keys on the front panel. "0" is indicated at first and, every time a different key is pressed, indicated number is increased. After completion of pressing all 9 keys, "PASS" is indicated. (Once a key is pressed, pressing it again is rejected.)

(4) After the completion of the checking, the equipment recovers normal operation by once removing the AC cord and inserting it again into the AC receptacle.

HOW TO FORCEFULLY TURN POWER ON

The equipment is not provided with any power switch. Therefore, power ON/OFF is controlled in the amplifier side. However, even without an amplifier, power is supplyable to the equipment according to the following methods provided any type of power is available, e.g. using a special jig or supplying the 4 types of voltages individually.

(When power is supplied from the amplifier, power is turned ON only for the tuner.)

(1) Supply power.

(2) Press 3 switches "STEREO/MONO","-" and "MEMORY/NEXT" at the same time.
(Press "STEREO/MONO" and "-" beforehand, and finally press "MEMORY/NEXT.")

However, when the equipment is started up by the methods above, service modes TIMER ON/OFF and FL tube and key input checking are not operable.

Clock Setting

Setting the Clock

Example: Set to 9:25 in the morning.

1 **Press CLOCK SET.**

2 **Set the hour with the – or + button.**

3 **Press MEMORY/NEXT.**

4 **Set the minute with the – or + button.**

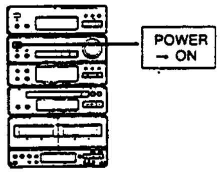
5 **Press MEMORY/NEXT.**
The clock starts operating.

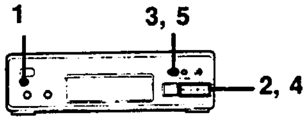
Information on the time

The European and U.K. model shows the time in 24-hour cycle.
The model for other countries shows the time in 12-hour cycle.
AM 12:00 = midnight
PM 12:00 = noon

When a power interruption occurs
If the power is recovered within several hours, there is no need to reset the clock, timer, and Wake Up Volume settings. If the power interruption is long, all the above settings are erased, and "0:00" ("AM 12:00") will flash on the display.

To change the frequency display to the time display
Press CLOCK DISP. on the remote commander. Press it again to change to the frequency display.





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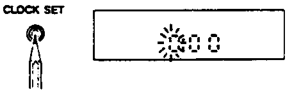

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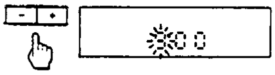

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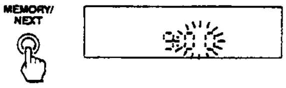

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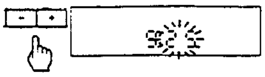


5

MEMORY/NEXT

Radio

The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

Tuning in Automatically

1 **Press BAND repeatedly until the desired band appears.**
As you press BAND, the band changes as follows:
European and U.K. model:
FM → MW → LW
Model for other countries:
FM → SW → MW

2 **Press MODE so that the TUNING indicator lights up.**

3 **Keep – or + depressed for more than 1 second.**
"AUTO" appears on the display and the unit tunes in a station automatically.

Repeat step 3 until the desired station appears.

Tuning in Manually

1 **Press BAND repeatedly until the desired band appears.**

2 **Press MODE so that the TUNING indicator lights up.**

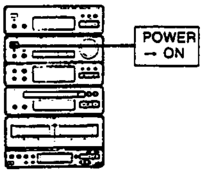
3 **Press – or + repeatedly until the desired station appears.**

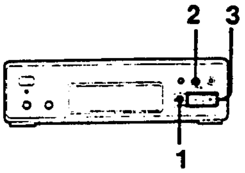
Indicator on the display

TUNED: Appears when a station of sufficient signal strength is tuned in.
STEREO: Appears when an FM stereo program of sufficient signal strength is received.

Antenna adjustment A

For MW and LW (SW) reception, find the best location for the supplied AM loop antenna.





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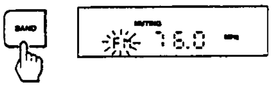

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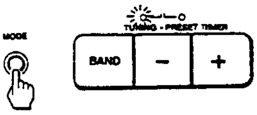

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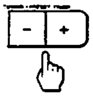
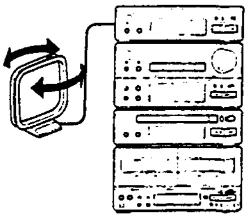


A



SECTION 2
GENERAL

This section is extracted from instruction manual.

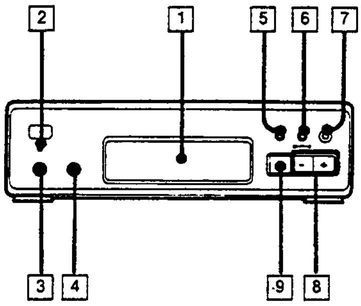
Parts Identification

Refer to the pages indicated in ● for use of the buttons.

Tuner Section A

1 Display window
2 CLOCK SET button ㉔
3 TIMER SELECT button (112)
4 TIMER SET button (112)
5 MEMORY/NEXT button ㉔ (60) (112)
6 MODE button (58) (62)
7 STEREO/MONO (stereo/monaural) button
8 TUNING PRESET/TIMER –/+ buttons
9 BAND selector (58)

A



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Radio

Storing Stations

You can store up to 20 FM stations and 10 MW stations and 10 LW (SW) stations in a desired sequence, so that you can tune in the stored station directly by entering the preset station number.
This operation is not possible with the remote commander.

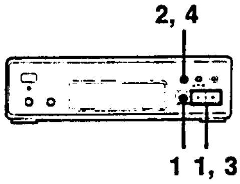
1 **Tune in the desired station.**

2 **Press MEMORY/NEXT.**
"MEMORY" and the preset station numbers appear on the display.

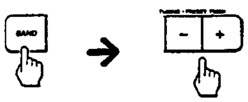
3 **While "MEMORY" is on (for several seconds), press – or + to select a desired preset number.**

4 **Press MEMORY/NEXT.**
"MEMORY" disappears, and the station is stored.

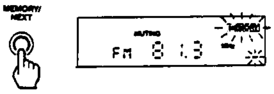
Repeat step 1 to 4 for each station to be stored.



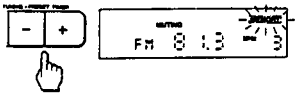
1



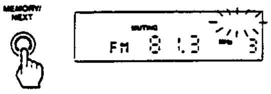
2



3



4



If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on (about 4 seconds).

When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with the steps 3 and 4.

To change the preset station
Store a desired station at the desired preset number by proceeding with the above steps.
The station previously preset will be erased.
Erasing only is not possible.

Radio

To Tune in a Preset Station

Notes:

- When you use the remote commander for the following operations make sure that the display of the remote commander shows "TUNER". If not, press TUNER on the remote commander.
- You cannot operate the buttons on the lid if the lid is open.

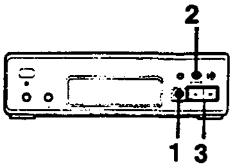
1 **Press BAND to select a desired band.**

2 **Press MODE so that the PRESET indicator lights up.**

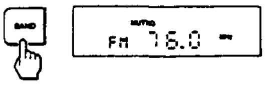
3 **Press – or + (◄ or ► on the remote commander) to select the desired preset station number.**

To tune in a preset station directly

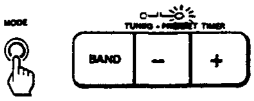
Possible only with the remote commander.
1 Press BAND to select a desired band.
2 Press the numeric buttons to select the desired preset station number.



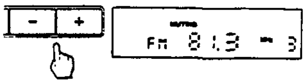
1



2



3



SECTION 3

ELECTRICAL ADJUSTMENTS

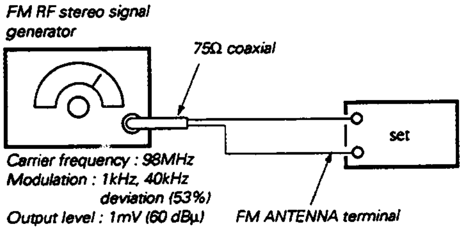
PRECAUTIONS IN REPAIRING

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

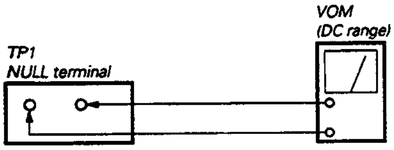
FM SECTION

FM DISCRIMINATOR ALIGNMENT (NULL CHECK)

Setting :


FM RF stereo signal generator
75Ω coaxial
set
FM ANTENNA terminal

Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (53%)
Output level : 1mV (60 dBμ)


VOM
(DC range)
TP1
NULL terminal

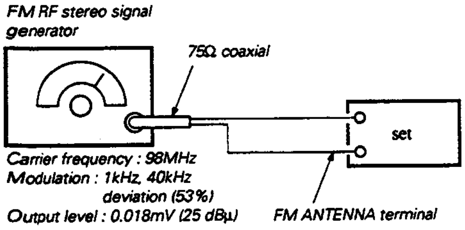
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM TUNING LEVEL adjustment shoud be made after FM discriminator alignment.

FM TUNING LEVEL ADJUSTMENT

Setting :


FM RF stereo signal generator
75Ω coaxial
set
FM ANTENNA terminal

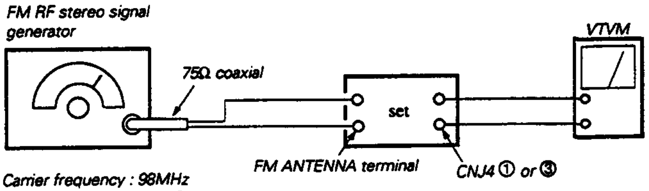
Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (53%)
Output level : 0.018mV (25 dBμ)

Procedure :

1. Tune the set to 98MHz.
2. Adjust T24 so that the TUNED LED goes on.

FM STEREO SEPARATION ADJUSTMENT

Setting :


FM RF stereo signal generator
75Ω coaxial
set
VTVM
FM ANTENNA terminal
CNJ4 ① or ③

Carrier frequency : 98MHz
Output level : 1mV (60 dBμ)
Modulation : L+R 33.75kHz deviation
L–R 33.75kHz deviation
Pilot Signal 19kHz 7.5kHz deviation

Procedure :
Tune the set to 98MHz.

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

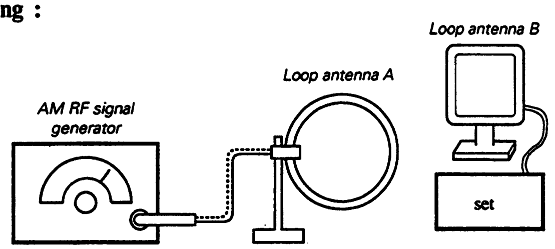
L-CH Stereo separation : Ⓐ – Ⓑ
R-CH Stereo separetion : Ⓒ – Ⓓ

The separations of both channels should be equal.

AM SECTION

AM TUNING LEVEL ADJUSTMENT

Setting :

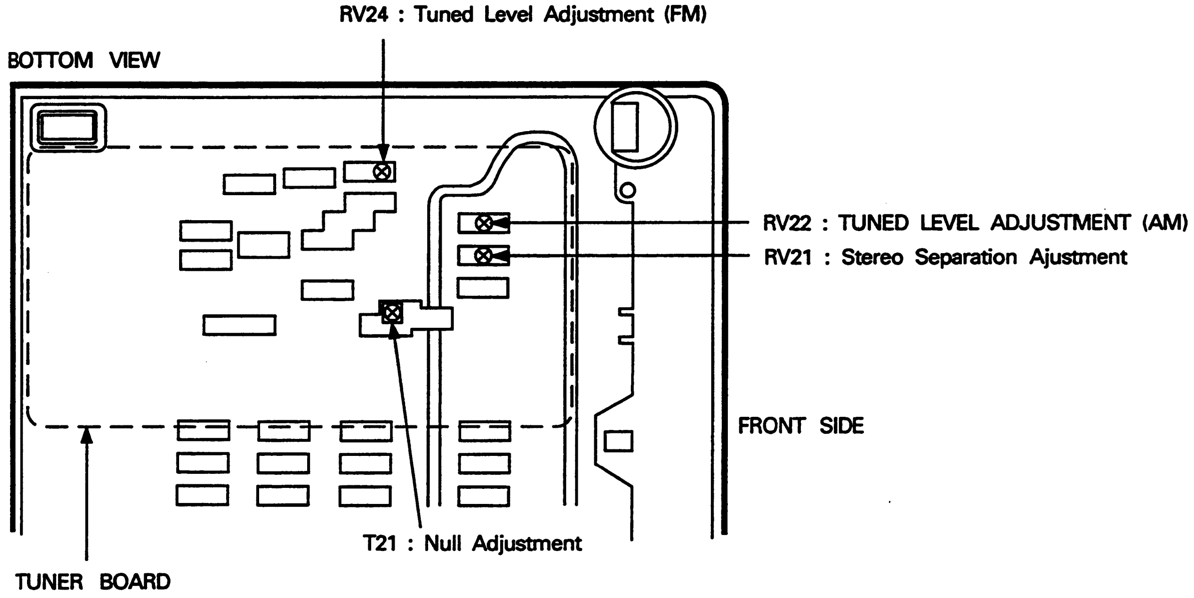

Loop antenna B
Loop antenna A
AM RF signal generator
set

Carrier frequency : 216kHz
30% amplitude
modulation by 400Hz signal

Procedure :

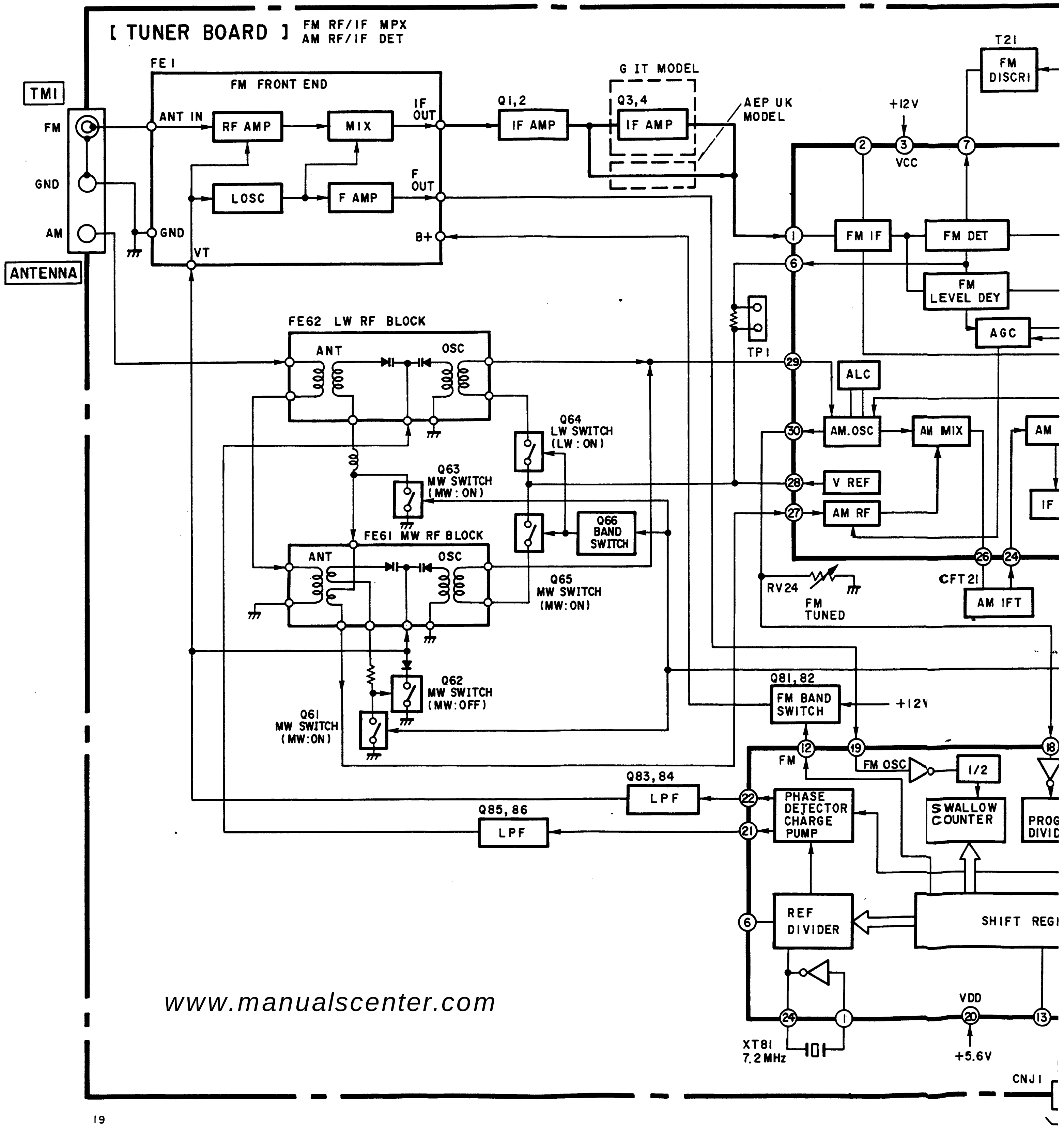
1. Set loop antenna A so that the loop antenna B input level becomes 2.5mV (68dB/m).
2. Tune the set to 216kHz.
3. Adjust the RV22 so that the TUNED LED goes on.

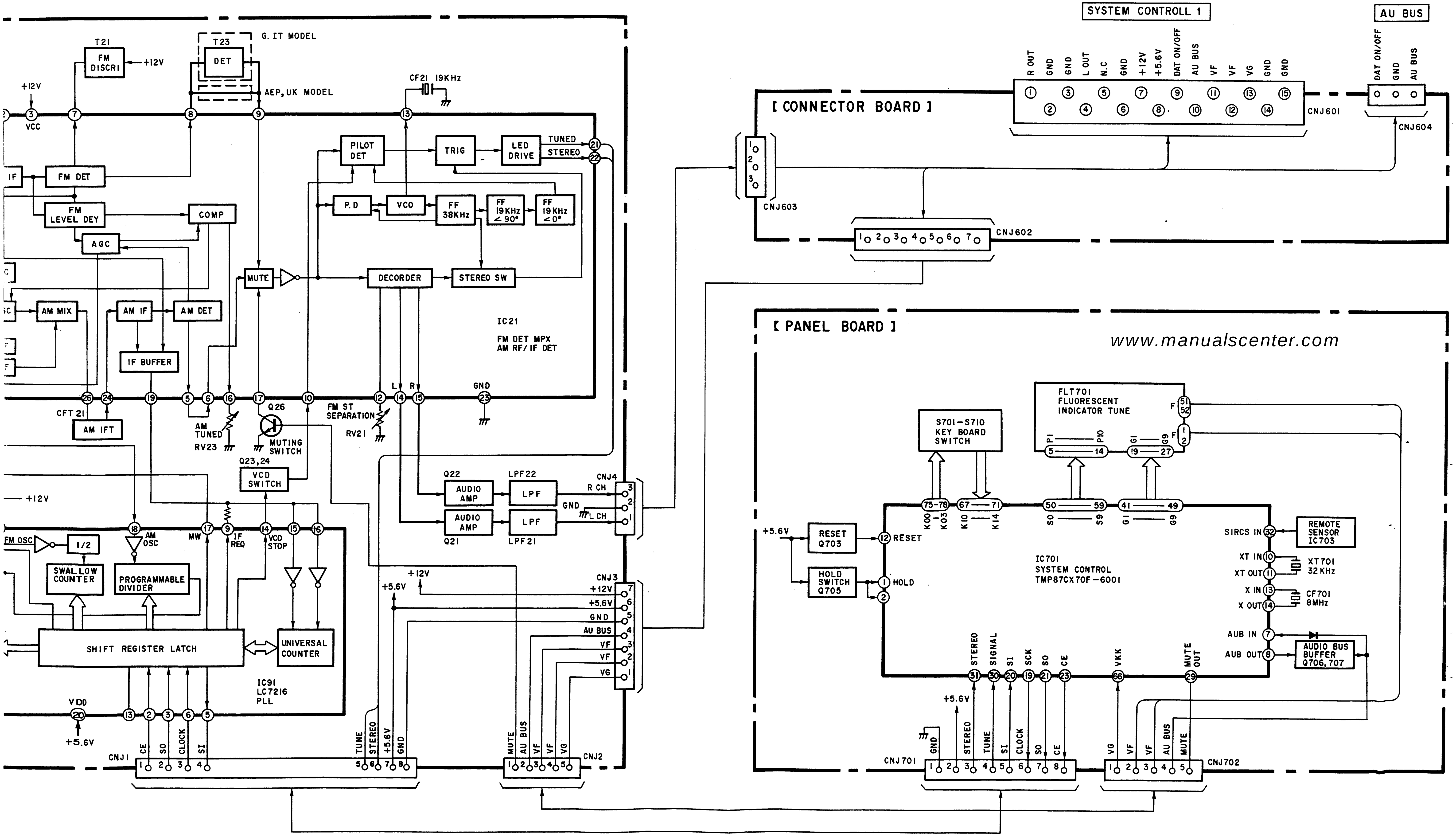
[PARTS ARRANGEMENT DIAGRAM FOR ADJUSTMENT]


RV24 : Tuned Level Adjustment (FM)
BOTTOM VIEW
RV22 : TUNED LEVEL ADJUSTMENT (AM)
RV21 : Stereo Separation Ajustment
FRONT SIDE
T21 : Null Adjustment
TUNER BOARD

SECTION 4
DIAGRAMS

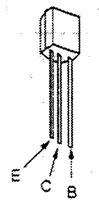
4-1. BLOCK DIAGRAM


[TUNER BOARD]
FM RF/IF MPX
AM RF/IF DET
TM1
FM
GND
AM
ANTENNA
FE1
FM FRONT END
ANT IN
RF AMP
MIX
IF OUT
LOSC
F AMP
F OUT
GND
VT
B+
Q1,2
IF AMP
G IT MODEL
Q3,4
IF AMP
AEP UK MODEL
+12V
VCC
T21
FM DISCRI
FM IF
FM DET
FM LEVEL DEY
AGC
TP1
ALC
AM.OSC
AM MIX
AM
V REF
AM RF
IF
FE62 LW RF BLOCK
ANT
OSC
Q64
LW SWITCH
(LW : ON)
Q63
MW SWITCH
(MW : ON)
Q66
BAND SWITCH
FE61 MW RF BLOCK
ANT
OSC
Q65
MW SWITCH
(MW:ON)
Q62
MW SWITCH
(MW:OFF)
Q61
MW SWITCH
(MW:ON)
RV24
FM TUNED
CFT21
AM IFT
Q81,82
FM BAND SWITCH
+12V
FM
FM OSC
1/2
Q83,84
LPF
Q85,86
LPF
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER
PROG DIVID
REF DIVIDER
SHIFT REGI
VDD
+5.6V
XT81
7.2MHz
CNJ1
19

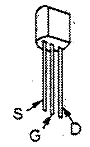

T21
FM DISCRI
+12V
+12V
VCC
G. IT MODEL
T23
DET
AEP, UK MODEL
CF21 19KHz
IF
FM DET
FM LEVEL DEY
COMP
AGC
PILOT DET
TRIG
LED DRIVE
TUNED
STEREO
P.D
VCO
FF 38KHz
FF 19KHz ∠90°
FF 19KHz ∠0°
MUTE
DECORDER
STEREO SW
AM MIX
AM IF
AM DET
IF BUFFER
IC21
FM DET MPX
AM RF/IF DET
L
R
GND
CFT 21
AM IFT
AM TUNED
RV23
Q26
MUTING SWITCH
FM ST SEPARATION
RV21
Q23,24
VCD SWITCH
Q22
AUDIO AMP
LPF22
LPF
CNJ4
R CH
GND
L CH
AUDIO AMP
Q21
LPF
LPF21
+12V
FM OSC
1/2
AM OSC
MW
IF REQ
VCO STOP
SWAL LOW COUNTER
PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IC91
LC7216
PLL
VDD
+5.6V
CNJ1
CE
SO
CLOCK
SI
TUNE
STEREO
+5.6V
GND
+12V
+5.6V
CNJ3
+12V
+5.6V
GND
AU BUS
VF
VF
VG
MUTE
AU BUS
VF
VF
VG
CNJ2
SYSTEM CONTROLL 1
R OUT
GND
GND
L OUT
N.C
GND
+12V
+5.6V
DAT ON/OFF
AU BUS
VF
VF
VG
GND
GND
AU BUS
DAT ON/OFF
GND
AU BUS
[CONNECTOR BOARD]
CNJ601
CNJ604
CNJ603
CNJ602
[PANEL BOARD]
FLT701
FLUORESCENT INDICATOR TUNE
F
S701-S710
KEY BOARD SWITCH
P1
P10
G1
G9
K00-K03
K10
K14
S0
S9
G1
G9
+5.6V
RESET Q703
RESET
HOLD SWITCH Q705
HOLD
IC701
SYSTEM CONTROL
TMP87CX70F-6001
SIRCS IN
REMOTE SENSOR IC703
XT IN
XT OUT
XT701 32KHz
X IN
X OUT
CF701 8MHz
AUB IN
AUB OUT
AUDIO BUS BUFFER Q706,707
STEREO
SIGNAL
SI
SCK
SO
CE
VKK
MUTE OUT
+5.6V
GND
STEREO
TUNE
SI
CLOCK
SO
CE
CNJ701
VG
VF
VF
AU BUS
MUTE
CNJ702

4-2. SEMICONDUCTOR LEAD LAYOUTS

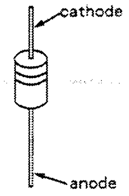
DTA114ES
DTC114ES
2SC2603-EF
2SC2669-OY
2SC3113-AB



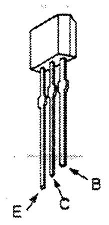
2SK246-GR3



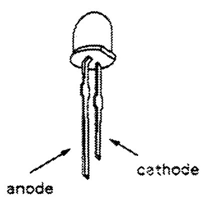
UZ-4.3BSA
1SS120


cathode
anode

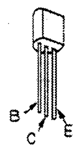
2SA1175-HFE
2SC2785-HFE



SEL2210S-D


anode
cathode

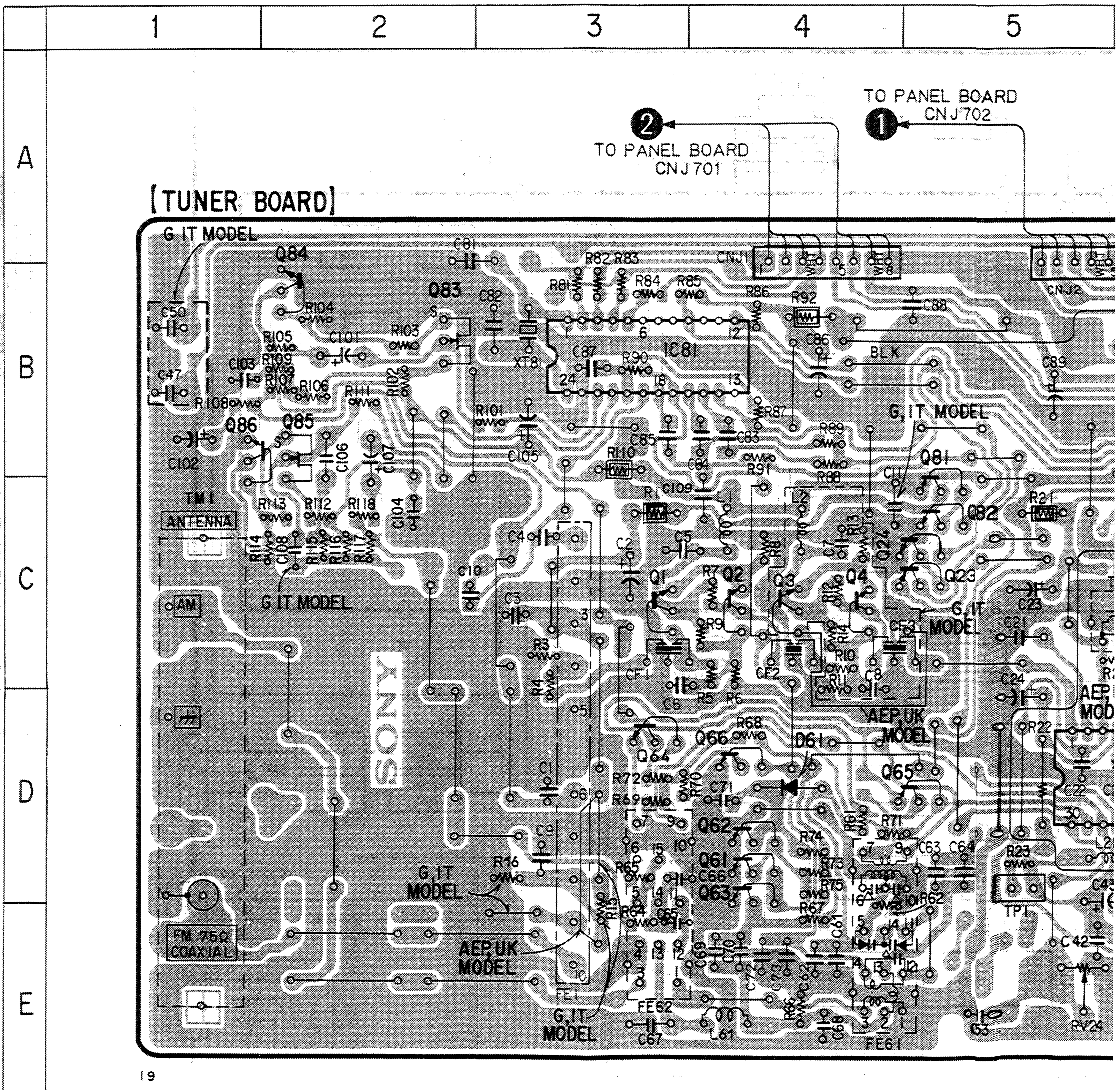
2SA1317-SU
2SC3330-T



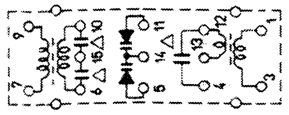
- SEMICONDUCTOR LOCATION

Ref. No	Location	
	H3600	H6600
D61	D – 4	D – 4
D701	G – 4	B – 5
D702	G – 4	B – 2
D707	H – 4	B – 3
D710	G – 2	B – 2
D711	G – 3	B – 3
D712	G – 7	A – 9
D714	G – 9	B – 5
D715	G – 10	B – 9
D716	G – 9	B – 9
D717	G – 8	A – 9
D718	G – 8	B – 2
IC21	C – 5	C – 5
IC81	C – 5	C – 5
IC701	G – 6	B – 6
IC702	G – 9	B – 9
IC703	G – 7	B – 9
Q1	C – 3	C – 3
Q2	C – 4	C – 4
Q3	C – 4	C – 4
Q4	C – 4	C – 4
Q21	C – 7	C – 7
Q22	C – 7	C – 7
Q23	C – 4	C – 4
Q24	C – 4	C – 4
Q26	E – 7	E – 7
Q61	D – 4	D – 4
Q62	D – 4	D – 4
Q63	D – 4	D – 4
Q64	D – 3	D – 3
Q65	D – 5	D – 5
Q66	D – 4	D – 4
Q81	C – 5	C – 5
Q82	C – 5	C – 5
Q701	G – 3	A – 2
Q702	F – 3	A – 2
Q703	G – 8	B – 8
Q705	H – 9	B – 8
Q706	G – 8	B – 9
Q707	G – 9	B – 9

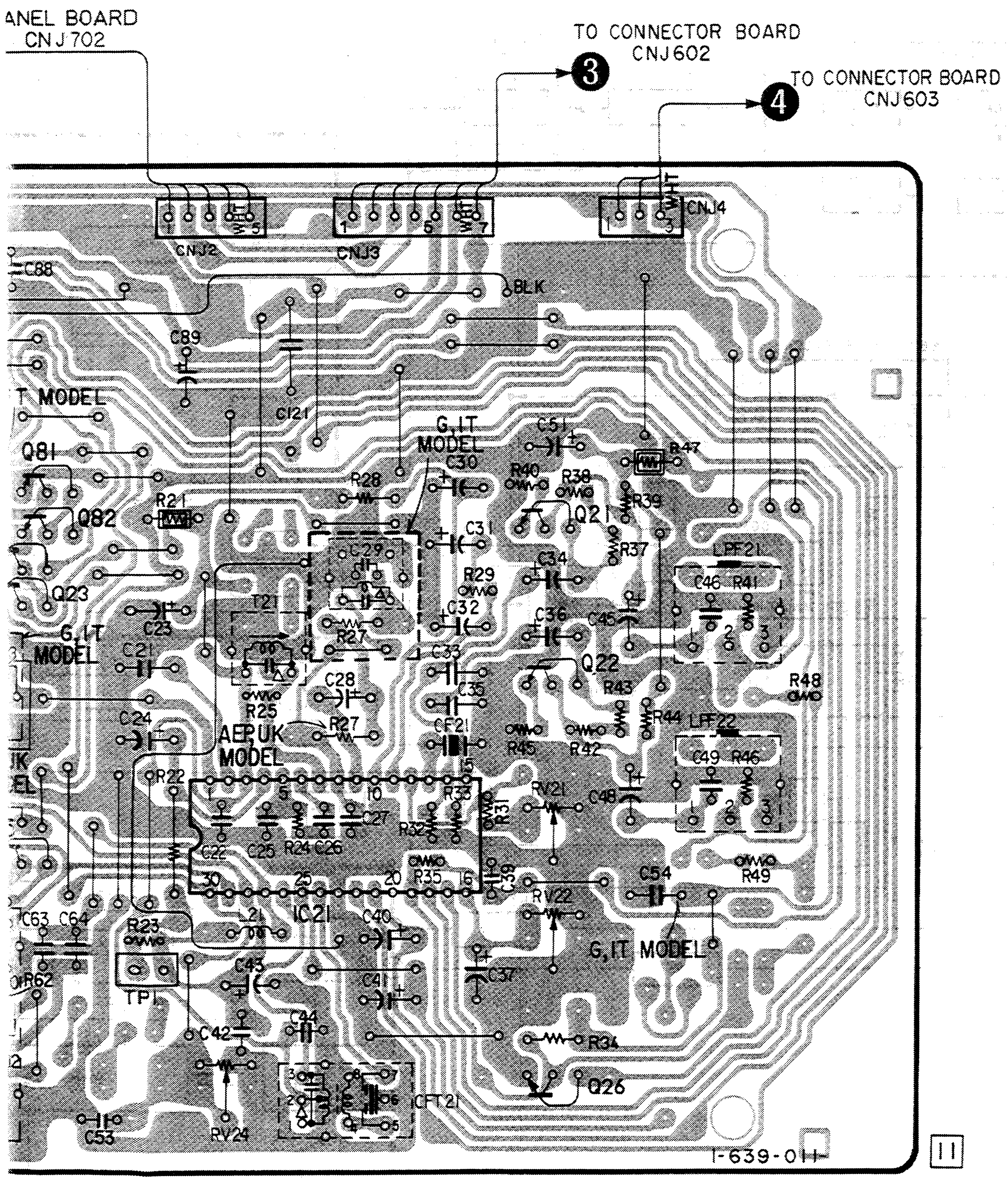
4-3. PRINTED WIRING BOARD – TUNER SECTION –


1
2
3
4
5
A
B
C
D
E
TO PANEL BOARD
CNJ702
TO PANEL BOARD
CNJ701
[TUNER BOARD]
G IT MODEL
Q84
Q83
Q86
Q85
IC81
XT81
CNJ1
CNJ2
BLK
TM1
ANTENNA
AM
FM 75Ω COAXIAL
SONY
G,IT MODEL
Q81
Q82
Q1
Q2
Q3
Q4
Q23
Q24
CF1
CF2
CF3
AEP,UK MODEL
D61
Q64
Q65
Q66
Q62
Q61
Q63
FE1
FE62
FE61
L61
TP1
RV24
19

FE62

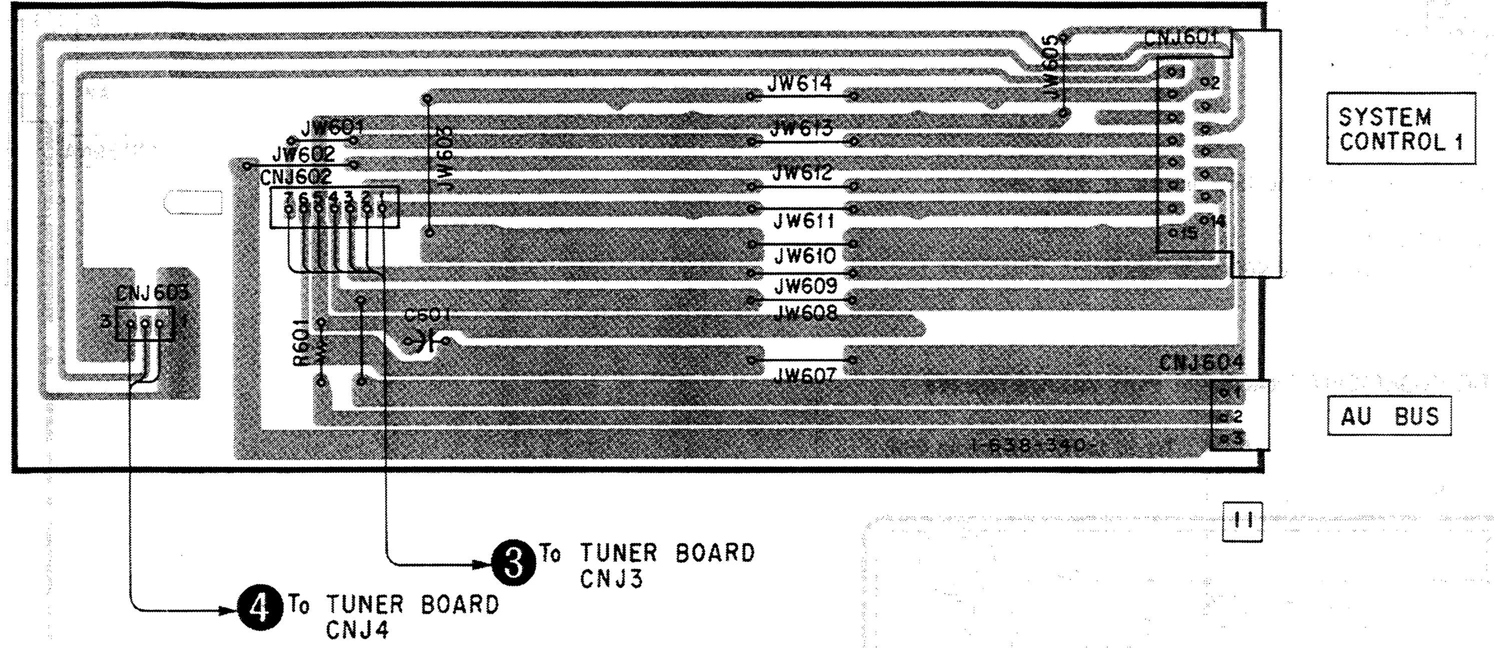


5 6 7 8 9 10 11 12 13


ANEL BOARD
CNJ702
TO CONNECTOR BOARD
CNJ602
③
TO CONNECTOR BOARD
CNJ603
④
CNJ2
CNJ3
CNJ4
BLK
C88
C89
C121
T MODEL
Q81
Q82
R21
Q23
G, IT MODEL
AEP,UK MODEL
T21
C29
R27
R28
R25
C28
C30
C31
C32
C33
C35
CF21
C51
R40
R38
Q21
R39
R37
R47
C34
C36
C45
Q22
LPF21
C46
R41
R43
R44
R45
R42
LPF22
C49
R46
R48
RV21
C48
IC21
R22
C22
C25
R24
C26
C27
R32
R33
R31
R35
C39
C54
R49
RV22
G, IT MODEL
C63
C64
R23
TP1
R62
C40
C41
C43
C42
C44
C37
R34
Q26
RV24
C53
CFT21
1-639-011-
11

(TCB007-31JFH/3HJFH)

【CONNECTOR BOARD】


CNJ601
SYSTEM CONTROL 1
JW605
JW614
JW613
JW612
JW611
JW610
JW609
JW608
JW607
JW601
JW602
JW606
CNJ602
CNJ603
R601
C601
CNJ604
AU BUS
1-638-340-
③ To TUNER BOARD
CNJ3
④ To TUNER BOARD
CNJ4

11

www.manualscenter.com

Note for schematic diagram:

- ○—— : indicated a lead wire mounted on the component side.
- ⬚— : indicates side identified with part number.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : internal component.
- ▭ : nonflammable resistor

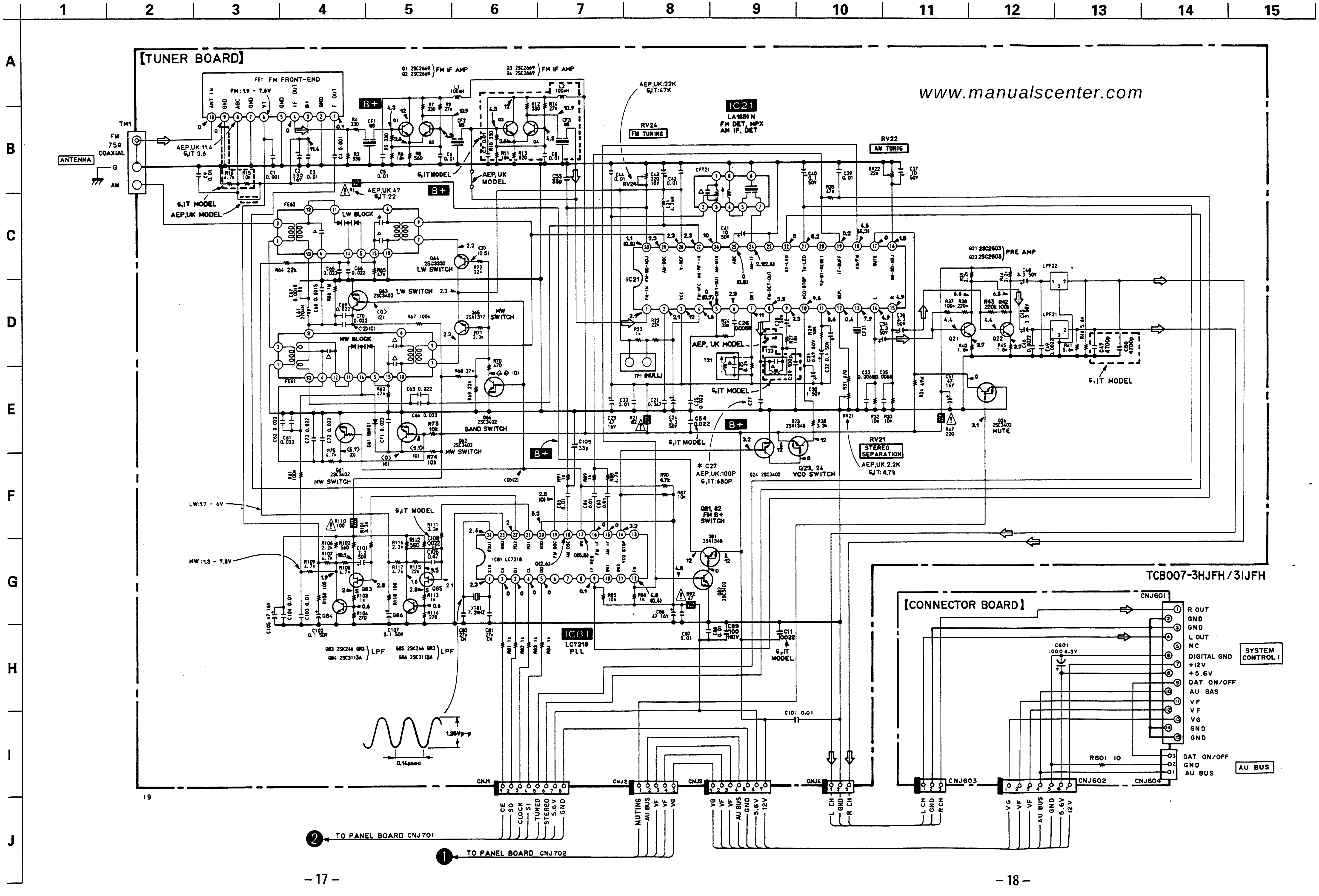
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.

no mark : FM
( ) : MW
< > : LW

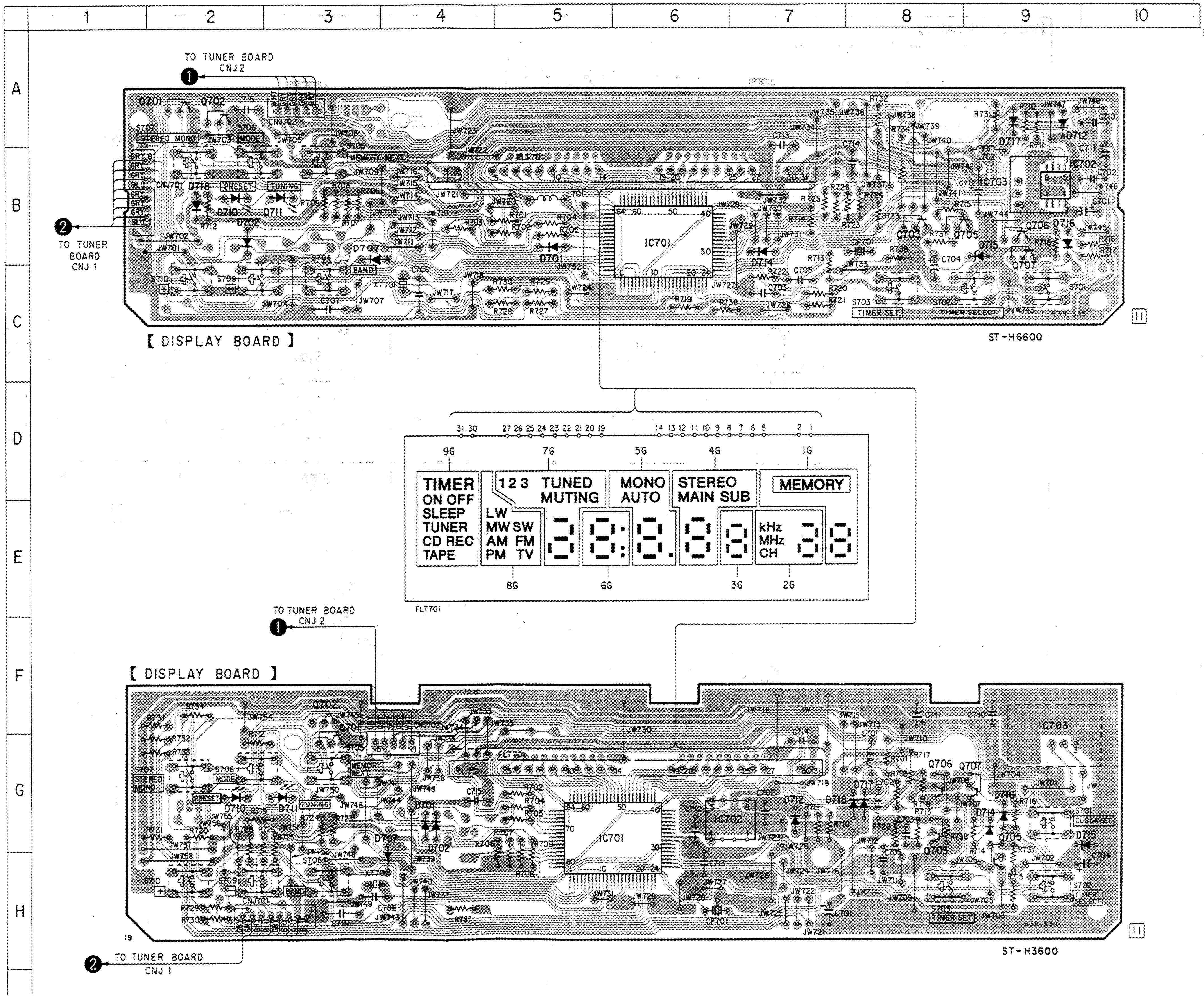
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path
  ⇨ : FM
- G : Germany Model
- IT : Itarian Model

4-4. SCHEMATIC DIAGRAM – TUNER SECTION –


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
【TUNER BOARD】
ANTENNA
TM1
FM 75Ω COAXIAL
G
AM
FE1 FM FRONT-END
FM:1.9 - 7.6V
ANT IN
GND
AGC
VT
IF OUT
B+
F OUT
AEP,UK:11.4
G,IT:3.6
G,IT MODEL
AEP,UK MODEL
Q1 2SC2669
Q2 2SC2669
FM IF AMP
Q3 2SC2669
Q4 2SC2669
FM IF AMP
B+
AEP,UK:47
G,IT:22
AEP,UK MODEL
FE62
LW BLOCK
Q64 2SC3330 LW SWITCH
Q63 2SC3402 LW SWITCH
Q65 2SA1317 MW SWITCH
FE61
MW BLOCK
Q66 2SC3402 BAND SWITCH
Q62 2SC3402 MW SWITCH
Q61 2SC3402 MW SWITCH
LW:1.7 - 6V
MW:1.3 - 7.8V
AEP,UK:22K
G,IT:47K
RV24
FM TUNING
IC21
LA1851N
FM DET, MPX
AM IF, DET
RV22
AM TUNING
CFT21
TP1 (NULL)
AEP, UK MODEL
T21
T23
G,IT MODEL
Q23 2SA1348
Q24 2SC3402
Q23, 24 VCO SWITCH
* C27
AEP,UK:100P
G,IT:680P
RV21
STEREO SEPARATION
AEP,UK:2.2K
G,IT:4.7k
Q21 2SC2603
Q22 2SC2603
PRE AMP
LPF22
LPF21
G,IT MODEL
Q26 2SC3402 MUTE
Q81, 82 FM B+ SWITCH
Q81 2SA1348
Q82 2SC3402
IC81 LC7218
IC81
LC7218
PLL
XT81 7.2MHz
Q83 2SK246 GR
Q84 2SC3113A
Q85 2SK246 GR
Q86 2SC3113A
LPF
G,IT MODEL
1.25Vp-p
0.14μsec
TCB007-3HJFH/31JFH
【CONNECTOR BOARD】
CNJ601
R OUT
GND
GND
L OUT
NC
DIGITAL GND
+12V
+5.6V
DAT ON/OFF
AU BAS
VF
VF
VG
GND
GND
SYSTEM CONTROL 1
C601 1000 6.3V
R601 10
DAT ON/OFF
GND
AU BUS
AU BUS
C101 0.01
CNJ1
CE
SO
CLOCK
SI
TUNED
STEREO
5.6V
GND
CNJ2
MUTING
AU BUS
VF
VF
VG
CNJ3
VG
VF
VF
AU BUS
GND
5.6V
12V
CNJ4
L CH
GND
R CH
CNJ603
L CH
GND
RCH
CNJ602
VG
VF
VF
AU BUS
GND
5.6V
12V
CNJ604
❷ TO PANEL BOARD CNJ701
❶ TO PANEL BOARD CNJ702
19

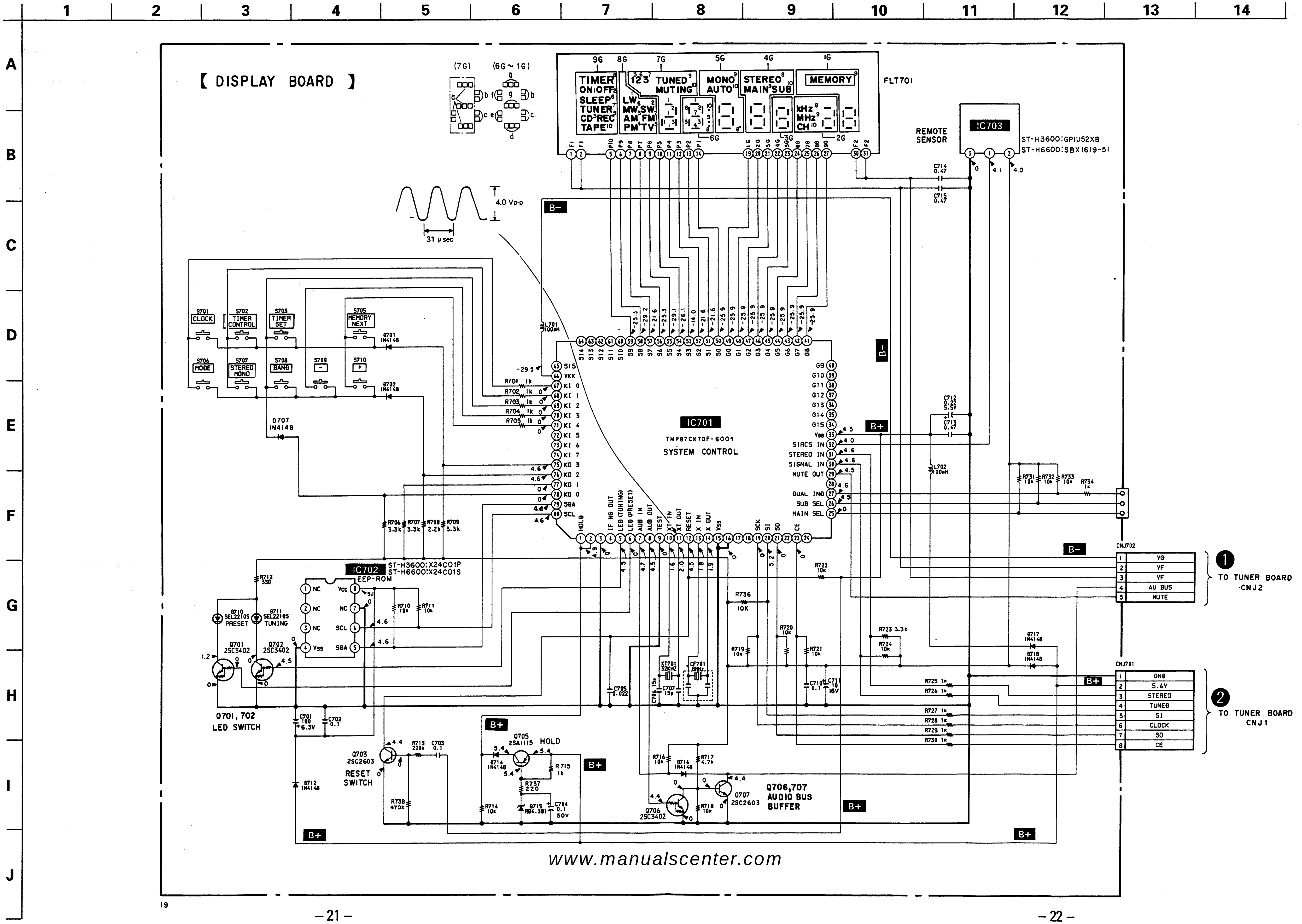
4-5. PRINTED WIRING BOARD – DISPLAY SECTION –

• See page 13 for semiconductor Location.


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
TO TUNER BOARD CNJ2
①
②
TO TUNER BOARD CNJ 1
【 DISPLAY BOARD 】
IC701
IC702
IC703
FLT701
CNJ701
CNJ702
STEREO MONO
MODE
MEMORY NEXT
PRESET
TUNING
BAND
TIMER SET
TIMER SELECT
CLOCK SET
ST-H6600
31 30 27 26 25 24 23 22 21 20 19 14 13 12 11 10 9 8 7 6 5 2 1
9G
7G
5G
4G
1G
TIMER
ON OFF
SLEEP
TUNER
CD REC
TAPE
123 TUNED
MUTING
MONO
AUTO
STEREO
MAIN SUB
MEMORY
LW
MW SW
AM FM
PM TV
kHz
MHz
CH
8G
6G
3G
2G
FLT701
TO TUNER BOARD CNJ 2
①
【 DISPLAY BOARD 】
②
TO TUNER BOARD CNJ 1
ST-H3600

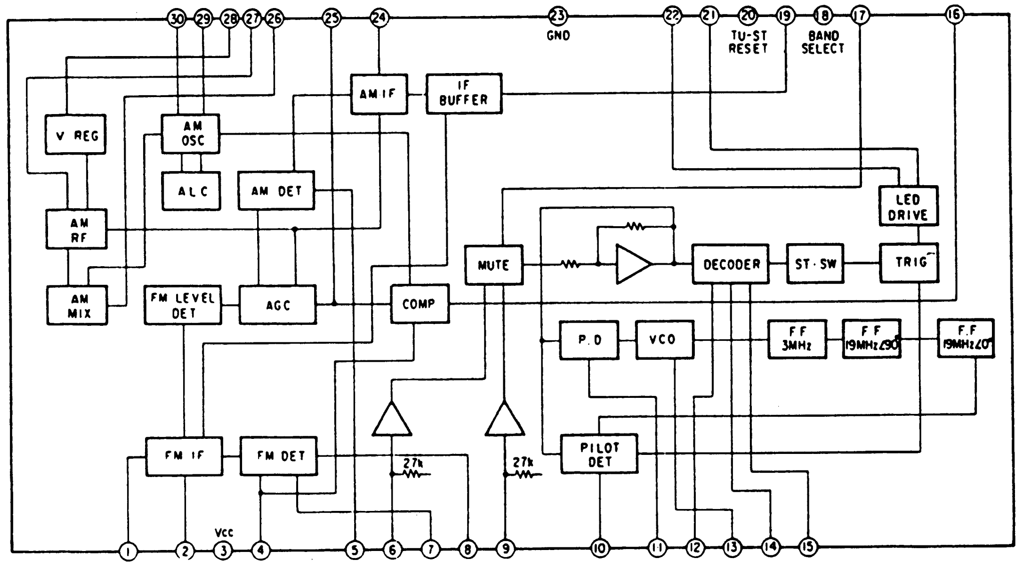
4-6. SCHEMATIC DIAGRAM – DISPLAY SECTION –

• See page 16 for note.

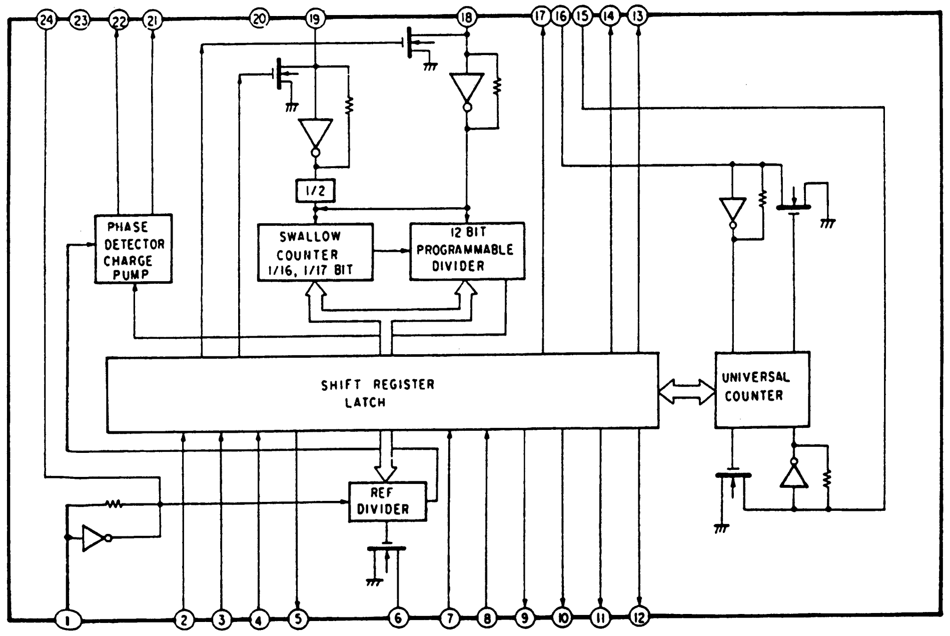

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
【 DISPLAY BOARD 】
(7G)
(6G ~ 1G)
FLT701
TIMER
ON/OFF
SLEEP
TUNER
CD REC
TAPE
123
LW
MW SW
AM FM
PM TV
TUNED
MUTING
MONO
AUTO
STEREO
MAIN SUB
MEMORY
kHz
MHz
CH
9G
8G
7G
5G
4G
1G
3G
6G
2G
4.0 Vp-p
31 μsec
B–
B+
REMOTE SENSOR
IC703
ST-H3600:GP1U52XB
ST-H6600:SBX1619-51
C714 0.47
C715 0.47
C712 0.22 5.5V
C713 0.47
L701 100μH
L702 100μH
IC701
TMP87CK70F-6001
SYSTEM CONTROL
S15
VKK
KI 0
KI 1
KI 2
KI 3
KI 4
KI 5
KI 6
KI 7
KO 3
KO 2
KO 1
KO 0
SDA
SCL
HOLD
IF ND OUT
LED (TUNING)
LED (PRESET)
AUB IN
AUB OUT
TEST
XT IN
XT OUT
RESET
X IN
X OUT
Vss
SCK
SI
SO
CE
G9
G10
G11
G12
G13
G14
G15
VDD
SIRCS IN
STEREO IN
SIGNAL IN
MUTE OUT
DUAL IND
SUB SEL
MAIN SEL
S701 CLOCK
S702 TIMER CONTROL
S703 TIMER SET
S705 MEMORY NEXT
S706 MODE
S707 STEREO MONO
S708 BAND
S709 –
S710 +
D701 1N4148
D702 1N4148
D707 1N4148
R701 1k
R702 1k
R703 1k
R704 1k
R705 1k
R706 3.3k
R707 3.3k
R708 2.2k
R709 3.3k
IC702
ST-H3600:X24C01P
ST-H6600:X24C01S
EEP-ROM
NC
Vcc
SCL
SDA
Vss
R710 10k
R711 10k
R712 330
D710 SEL2210S PRESET
D711 SEL2210S TUNING
Q701 2SC3402
Q702 2SC3402
Q701, 702 LED SWITCH
C701 100 6.3V
C702 0.1
Q703 2SC2603
RESET SWITCH
R713 220k
C703 0.1
R738 470k
D712 1N4148
Q705 2SA1115
HOLD
D714 1N4148
R715 1k
R737 220
R714 10k
D715 RD4.3EB1
C704 0.1 50V
C705 0.022
XT701 32kHz
CF701 8MHz
C706 15p
C707 15p
R736 10K
R719 10k
R720 10k
R721 10k
C710 0.1
C711 10 16V
R722 10k
R716 10k
D716 1N4148
R717 4.7k
R718 10k
Q706 2SC3402
Q707 2SC2603
Q706,707 AUDIO BUS BUFFER
R723 3.3k
R724 10k
R725 1k
R726 1k
R727 1k
R728 1k
R729 1k
R730 1k
R731 10k
R732 10k
R733 10k
R734 1k
D717 1N4148
D718 1N4148
CNJ702
VG
VF
VF
AU BUS
MUTE
❶
TO TUNER BOARD CNJ2
CNJ701
GND
5.6V
STEREO
TUNED
SI
CLOCK
SO
CE
❷
TO TUNER BOARD CNJ1

4-7. IC BLOCK DIAGRAMS

IC21 LA1851N


30
29
28
27
26
25
24
23
GND
22
21
20
TU-ST RESET
19
18
BAND SELECT
17
16
AM IF
IF BUFFER
V REG
AM OSC
ALC
AM DET
LED DRIVE
AM RF
MUTE
DECODER
ST · SW
TRIG
AM MIX
FM LEVEL DET
AGC
COMP
P.D
VCO
F F 3MHz
F F 19MHz∠90°
F.F 19MHz∠0°
FM IF
FM DET
27k
27k
PILOT DET
VCC
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

IC81 LC7218


24
23
22
21
20
19
18
17
16
15
14
13
1/2
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16, 1/17 BIT
12 BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
REF DIVIDER
1
2
3
4
5
6
7
8
9
10
11
12

4-8. PIN FUNCTION OF IC701 SYSTEM CONTROLLER (TMP87CK70F-6001)

The terminals work to control tuner section (IC21, 81), FL tube display and reading and writing of IC702 (preset data), etc. according to key input and signal from the remote controller.

PIN No.	PIN NAME	I/O	ACTIVE	PIN FUNCTION
1	HOLD	I	↓	HOLD detecting interrupt terminal
2	HOLD RESET	I	↑	HOLD resetting interrupt terminal
3		I		Not in use
4	IF NGOUT	O	H	IF count NG output
5	LED1	O	H	TUNING LED ON
6	LED2	O	H	PRESET LED ON
7	AUB IN	I	L	AUDIO BUS input
8	AUB OUT	O	L	AUDIO BUS output
9	TEST	I	H	Test terminal
10	XT IN	I		Low frequency oscillator connection terminal (32KHz)
11	XT OUT	O		Low frequency oscillator connection terminal (32KHz)
12	RESET	I	L	Reset signal input
13	X IN	I		High frequency oscillator connection terminal (8MHz)
14	X OUT	O		High frequency oscillator connection terminal (8MHz)
15	VSS			GND
16		I		Not in use
17, 18		O		Not in use
19	SCK	O		PLL serial clock output
20	SI	I		PLL serial data input
21	SO	O		PLL serial data output
22				Not in use
23	CE	O	H	PLL chip enable
24				Not in use
25	MAIN SEL	O	L	Main sound selection terminal (Not in use)
26	SUB SEL	O	L	Sub sound selection terminal (Not in use)
27	DUAL IND	I	L	Sound dual signal detection terminal (Not in use)
28				Not in use
29	MUTE OUT	O	L	MUTING output
30	SIGNAL IN	I	L	TUNED input
31	STEREO IN	I	L	STEREO input
32	SIRCS IN	I	L	SIRCS input
33	VDD			+5V
34 - 40		O		Not in use
41 - 49	G0 - G8	O	H	FL tube digit output
50 - 59	S0 - S9	O	H	FL tube segment output
60 - 65		O	H	Not in use
66	VKK			FL tube driving power supply
67 - 71	KI0 - KI4	I	H	Key input
72		I		Not in use
73, 74				Not in use
75 - 78	KO0 - KO3	O	H	Key output
79	SDA	I/O		Data input/output for EEPROM
80	SCL	O		Clock output for EEPROM

SECTION 5

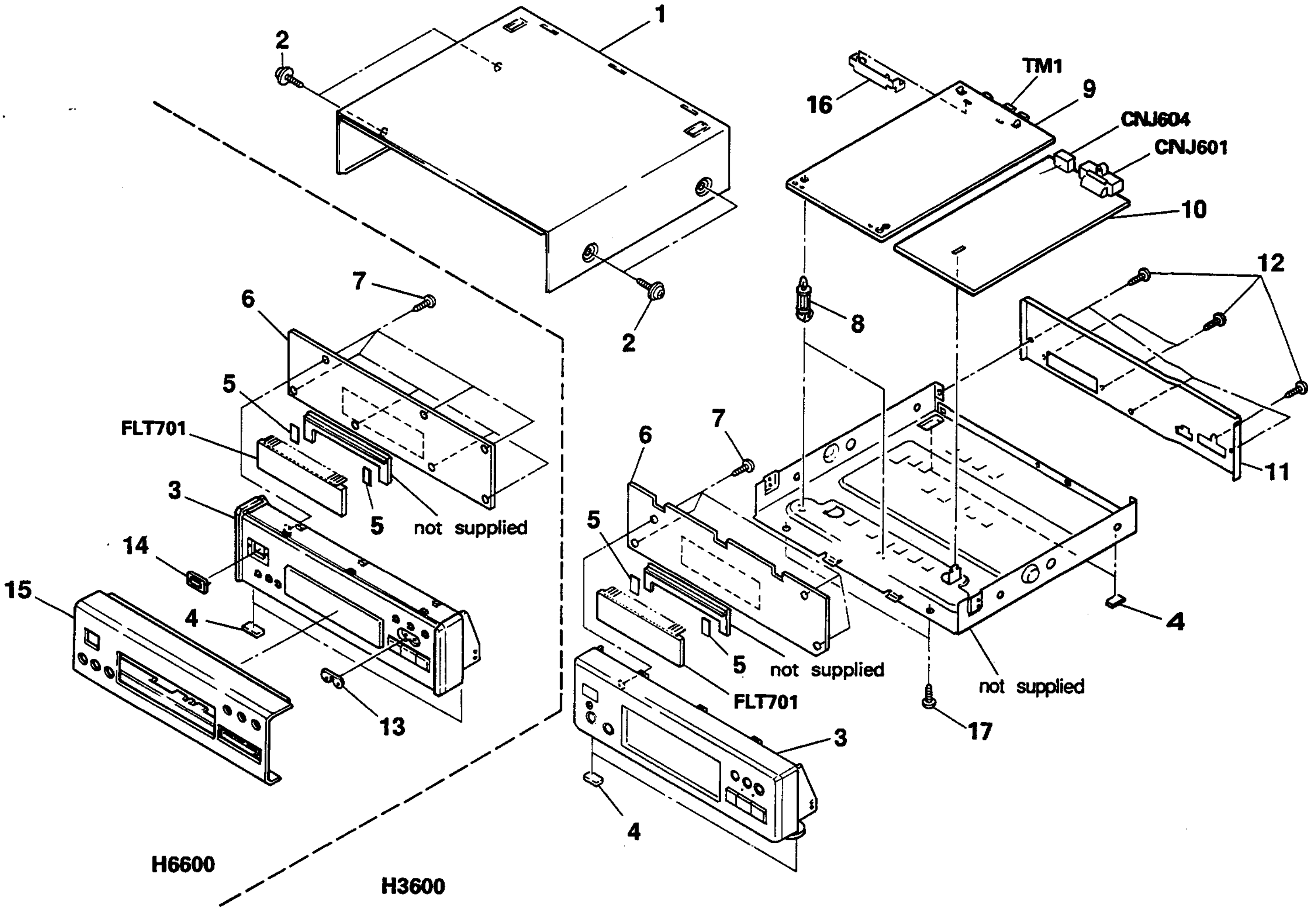
EXPLODED VIEW

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
1	4-944-423-11	CASE (K206522) (H3600)	
	4-932-844-01	CASE (H6600)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4941-544-1	PANEL ASSY, ASSY (H3600)	
	X-4942-523-1	PANEL ASSY, ASSY (H6600)	
4	4-930-336-01	FOOT (FELT)	
5	* 4-932-810-11	CUSHION (FL)	
6	* A-4341-562-A	DISPLAY BOARD, COMPLETE (H3600: AEP,UK)	
	* A-4341-563-A	DISPLAY BOARD, COMPLETE (H3600: G,IT)	
	* A-4341-554-A	DISPLAY BOARD, COMPLETE (H6600: AEP,UK)	
	* A-4341-556-A	DISPLAY BOARD, COMPLETE (H6600: G,IT)	
7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
8	* 4-914-008-01	HOLDER, PCB	
9	A-4303-367-A	TUNER BOARD(TCB007-3HJFH),COMPLETE(AEP,UK)	
	A-4303-368-A	TUNER BOARD(TCB007-3IJFH),COMPLETE(G,IT)	
10	1-638-340-11	CONNECTOR BOARD (H3600)	
	1-638-336-11	CONNECTOR BOARD (H6600)	
11	* 4-942-893-51	PANEL, BACK (H3600: AEP,UK)	
	* 4-942-893-81	PANEL, BACK (H3600: G)	
	* 4-942-893-91	PANEL, BACK (H3600: IT)	
	* 4-942-893-01	PANEL, BACK (H6600: AEP,UK)	
	* 4-942-893-31	PANEL, BACK (H6600: G)	
	* 4-942-893-41	PANEL, BACK (H6600: IT)	
12	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
13	4-944-427-01	INDICATOR (H6600)	
14	4-944-425-01	FILTER (H6600)	
15	4-944-429-11	PANEL (ST), FRONT (H6600)	
16	* 4-924-988-11	PLATE (ST), GROUND	
17	7-682-547-09	SCREW +BVTT 3X6(S) (H6600)	

TUNER

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF :μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	A-4303-367-A	TUNER BOARD(TCB007-3HJFH), COMPLETE(AEP, UK)				
	A-4303-368-A	TUNER BOARD(TCB007-3IJFH), COMPLETE(G, IT)				
		***				
*	4-324-988-11	PLATE (ST), GROUND				
		(CAPACITOR)				
C1	1-162-294-11	CERAMIC CHIP	0.001uF	20%	25V	
C2	1-124-477-11	ELECT	330uF	20%	16V	
C3	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C4	1-162-294-31	CERAMIC CHIP	0.001uF	20%	25V	
C5	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C6	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C7	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	(G, IT)
C8	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	(G, IT)
C9	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C11	1-101-005-00	CERAMIC	0.022uF		50V	(G, IT)
C21	1-101-006-00	CERAMIC	0.047uF		50V	
C22	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C23	1-124-477-11	ELECT	47uF	20%	25V	
C24	1-123-382-00	ELECT	3.3uF	20%	100V	
C25	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C26	1-163-019-00	CERAMIC CHIP	0.0068uF	20%	12V	
C27	1-162-516-11	CERAMIC CHIP	100pF	10%	50V	(AEP, UK)
C27	1-163-007-11	CERAMIC CHIP	680pF	20%	50V	(G, IT)
C28	1-124-903-11	ELECT	1.0uF	20%	50V	
C29	1-162-516-11	CERAMIC CHIP	100pF	10%	50V	(G, IT)
C30	1-124-903-11	ELECT	1.0uF	20%	50V	
C31	1-124-902-00	ELECT	0.47uF	20%	50V	
C32	1-124-463-00	ELECT	0.1uF	20%	50V	
C33	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C34	1-123-382-00	ELECT	3.3uF	20%	100V	
C35	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C36	1-123-382-00	ELECT	3.3uF	20%	100V	
C37	1-124-907-11	ELECT	10uF	20%	50V	
C39	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C40	1-124-463-00	ELECT	0.1uF	20%	50V	
C41	1-124-907-11	ELECT	10uF	20%	50V	
C42	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C43	1-126-176-11	ELECT	220uF	20%	10V	
C44	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C45	1-123-382-00	ELECT	3.3uF	20%	100V	
C46	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V	
C47	1-163-170-00	CERAMIC CHIP	0.0047uF	20%	25V	(G, IT)
C48	1-123-382-00	ELECT	3.3uF	20%	100V	
C49	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V	
C50	1-163-170-00	CERAMIC CHIP	0.0047uF	20%	25V	(G, IT)
C51	1-124-477-11	ELECT	47uF	20%	25V	
C53	1-163-105-00	CERAMIC CHIP	33pF	5%	50V	
C54	1-101-005-00	CERAMIC	0.022uF		50V	(G, IT)
C61	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C62	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C63	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C64	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C65	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C66	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C67	1-102-120-00	CERAMIC	0.0018uF	10%	50V	
C68	1-163-111-11	CERAMIC CHIP	0.0015uF	20%	25V	
C69	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C70	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C71	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C72	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C73	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C81	1-102-961-00	CERAMIC	27pF	5%	50V	
C82	1-102-961-00	CERAMIC	27pF	5%	50V	
C83	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C84	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	

TUNER

Ref. No.	Part No.	Description	Remarks
C85	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C86	1-124-477-11	ELECT 47uF 20% 25V	
C87	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C88	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C89	1-124-443-00	ELECT 100uF 20% 10V	
C101	1-124-925-11	ELECT 2.2uF 20% 100V	
C102	1-124-463-00	ELECT 0.1uF 20% 50V	
C103	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C104	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C105	1-124-477-11	ELECT 47uF 20% 25V	
C106	1-136-173-00	FILM 0.47uF 5% 50V	
C107	1-124-463-00	ELECT 0.1uF 20% 50V	
C108	1-163-063-00	CERAMIC MELF 0.022uF 25V	(G, IT)
C109	1-162-211-31	CERAMIC 33pF 5% 50V	
C121	1-161-379-00	CERAMIC 0.01uF 30% 16V	(G, IT)
		(FILTER)	
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-567-389-11	FILTER, CERAMIC	
CF3	1-567-389-11	FILTER, CERAMIC (G, IT)	
		(OSCILLATOR)	
CF21	1-577-075-11	OSCILLATOR, CERAMIC (19KHz)	
		(IF TRANSFORMER)	
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	
		(CONNECTOR)	
CNJ1	* 1-564-342-11	SOCKET, CONNECTOR 8P	
CNJ2	* 1-564-339-00	PIN, CONNECTOR 5P	
CNJ3	* 1-564-341-11	PIN, CONNECTOR 7P	
CNJ4	* 1-564-337-00	PIN, CONNECTOR 3P	
		(DIODE)	
D61	8-719-912-20	DIODE 1SS120	
		(FM FRONT END)	
FE1	1-463-857-11	FRONT END, FM (G, IT)	
FE1	1-463-862-21	FRONT END, FM (AEP, UK)	
		(ENCAPSULATED COMPONENT)	
FE61	1-236-462-11	ENCAPSULATED COMPONENT (MW RF)	
FE62	1-236-463-11	ENCAPSULATED COMPONENT (LW RF)	
		(IC)	
IC21	8-759-821-45	IC LA1851N	
IC81	8-759-820-91	IC LC7218	

Ref. No.	Part No.	Description	Remarks
		(INDUCTOR)	
L1	1-410-645-31	MICRO INDUCTOR 100uH	
L2	1-410-645-31	MICRO INDUCTOR 100uH (G, IT)	
L21	1-407-500-00	MICRO INDUCTOR 4.7mH	
L61	1-410-525-11	MICRO INDUCTOR 220uH	
		(LOW PASS FILTER)	
LPF21	1-235-164-00	FILTER, LOW PASS	
LPF22	1-235-164-00	FILTER, LOW PASS	
		(TRANSISTOR)	
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q3	8-129-230-99	TRANSISTOR 2SC2669-OY (G, IT)	
Q4	8-129-230-99	TRANSISTOR 2SC2669-OY (G, IT)	
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q23	8-729-900-61	TRANSISTOR DTA114ES	
Q24	8-729-900-80	TRANSISTOR DTC114ES	
Q26	8-729-900-80	TRANSISTOR DTC114ES	
Q61	8-729-900-80	TRANSISTOR DTC114ES	
Q62	8-729-900-80	TRANSISTOR DTC114ES	
Q63	8-729-900-80	TRANSISTOR DTC114ES	
Q64	8-729-820-24	TRANSISTOR 2SC3330-T	
Q65	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q66	8-729-900-80	TRANSISTOR DTC114ES	
Q81	8-729-900-61	TRANSISTOR DTA114ES	
Q82	8-729-900-80	TRANSISTOR DTC114ES	
Q83	8-729-202-67	TRANSISTOR 2SK246GR3	
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB	
Q85	8-729-202-67	TRANSISTOR 2SK246GR3	
Q86	8-729-230-93	TRANSISTOR 2SC3113-AB	
		(RESISTOR)	
R1	⚠ 1-249-397-11	CARBON (SMALL) 22 5% 1/4W F	(G, IT)
R1	⚠ 1-249-401-11	CARBON (SMALL) 47 5% 1/4W F	(AEP, UK)
R3	1-249-329-11	CARBON MELF 330 5% 1/8W	
R4	1-249-329-11	CARBON MELF 330 5% 1/8W	
R5	1-249-329-11	CARBON MELF 330 5% 1/8W	
R6	1-249-350-11	CARBON MELF 18K 5% 1/8W	
R7	1-249-329-11	CARBON MELF 330 5% 1/8W	
R8	1-249-332-11	CARBON MELF 560 5% 1/8W	
R9	1-249-352-11	CARBON MELF 27K 5% 1/8W	
R10	1-249-329-11	CARBON MELF 330 5% 1/8W (G, IT)	
R11	1-249-350-11	CARBON MELF 18K 5% 1/8W (G, IT)	
R12	1-249-329-11	CARBON MELF 330 5% 1/8W (G, IT)	
R13	1-249-334-11	CARBON MELF 820 5% 1/8W (G, IT)	
R14	1-249-352-11	CARBON MELF 27K 5% 1/8W (G, IT)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

TUNER CONNECTOR DISPLAY

Ref. No.		Part No.	Description	Remarks
R15		1-249-374-11	CARBON MELF 10K 5% 1/8W	(G, IT)
R16		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	(G, IT)
R21	⚠	1-249-404-00	CARBON (SMALL) 82 5% 1/4W	F
R22		1-249-433-11	CARBON (SMALL) 22K 5% 1/4W	
R23		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R24		1-249-353-11	CARBON MELF 33K 5% 1/8W	
R25		1-249-346-11	CARBON MELF 8.2K 5% 1/8W	
R27		1-249-432-11	CARBON (SMALL) 18K 5% 1/4W	
R28		1-249-423-11	CARBON (SMALL) 3.3K 5% 1/4W	
R29		1-249-347-11	CARBON MELF 10K 5% 1/8W	
R31		1-249-331-11	CARBON MELF 470 5% 1/8W	
R32		1-249-347-11	CARBON MELF 10K 5% 1/8W	
R33		1-249-347-11	CARBON MELF 10K 5% 1/8W	
R34		1-249-437-11	CARBON (SMALL) 47K 5% 1/4W	
R35		1-249-355-11	CARBON MELF 47K 5% 1/8W	
R37		1-249-359-11	CARBON MELF 100K 5% 1/8W	
R38		1-249-363-11	CARBON MELF 220K 5% 1/8W	
R39		1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R40		1-249-338-11	CARBON MELF 1.8K 5% 1/8W	
R41		1-249-344-11	CARBON MELF 5.6K 5% 1/8W	
R42		1-249-359-11	CARBON MELF 100K 5% 1/8W	
R43		1-249-363-11	CARBON MELF 220K 5% 1/8W	
R44		1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R45		1-249-338-11	CARBON MELF 1.8K 5% 1/8W	
R46		1-249-344-11	CARBON MELF 5.6K 5% 1/8W	
R47	⚠	1-249-409-11	CARBON (SMALL) 220 5% 1/4W	F
R48		1-249-359-11	CARBON MELF 100K 5% 1/8W	
R49		1-249-359-11	CARBON MELF 100K 5% 1/8W	
R61		1-249-359-11	CARBON MELF 100K 5% 1/8W	
R62		1-249-355-11	CARBON MELF 47K 5% 1/8W	
R64		1-249-351-11	CARBON MELF 22K 5% 1/8W	
R65		1-249-355-11	CARBON MELF 47K 5% 1/8W	
R66		1-215-493-00	CARBON MELF 1M 5% 1/5W	
R67		1-249-359-11	CARBON MELF 100K 5% 1/8W	
R68		1-249-352-11	CARBON MELF 27K 5% 1/8W	
R69		1-249-351-11	CARBON MELF 22K 5% 1/8W	
R70		1-249-331-11	CARBON MELF 470 5% 1/8W	
R71		1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R72		1-249-351-11	CARBON MELF 22K 5% 1/8W	
R73		1-249-347-11	CARBON MELF 10K 5% 1/8W	
R74		1-249-347-11	CARBON MELF 10K 5% 1/8W	
R75		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R81		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R82		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R83		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R84		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R85		1-249-347-11	CARBON MELF 10K 5% 1/8W	
R86		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R87		1-249-347-11	CARBON MELF 10K 5% 1/8W	

Ref. No.		Part No.	Description	Remarks
R88		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R89		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R90		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R91		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R92	⚠	1-249-401-11	CARBON (SMALL) 47 5% 1/4W	F
R101		1-249-341-11	CARBON MELF 3.3K 5% 1/8W	
R102		1-249-332-11	CARBON MELF 560 5% 1/8W	
R103		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R104		1-249-328-11	CARBON MELF 270 5% 1/8W	
R105		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R106		1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R107		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R108		1-249-323-11	CARBON MELF 100 5% 1/8W	
R109		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R110	⚠	1-249-405-11	CARBON (SMALL) 100 5% 1/4W	F
R111		1-249-341-11	CARBON MELF 3.3K 5% 1/8W	
R112		1-249-332-11	CARBON MELF 560 5% 1/8W	
R113		1-249-335-11	CARBON MELF 1K 5% 1/8W	
R114		1-249-328-11	CARBON MELF 270 5% 1/8W	
R115		1-249-351-11	CARBON MELF 22K 5% 1/8W	
R116		1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R117		1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R118		1-249-323-11	CARBON MELF 100 5% 1/8W	
			< VARIABLE RESISTOR >	
RV21		1-238-598-11	RES, ADJ, CARBON 2.2K	(AEP, UK)
RV21		1-238-599-11	RES, ADJ, CARBON 4.7K	(G, IT)
RV22		1-238-601-11	RES, ADJ, CARBON 22K	
RV24		1-238-601-11	RES, ADJ, CARBON 22K	(AEP, UK)
RV24		1-238-602-11	RES, ADJ, CARBON 47K	(G, IT)
			< TRANSFORMER >	
T21		1-404-807-11	TRANSFORMER, DISCRIMINATOR	
T23		1-236-465-11	ENCAPSULATED COMPONENT	(G, IT)
			< TERMINAL >	
TM1	*	1-537-138-31	TERMINAL BOARD (ANTENNA)	
			< CONNECTOR PIN >	
TP1	*	1-560-060-00	PIN, CONNECTOR 2P	
			< CRYSTAL VIBRATOR >	
XT81		1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)	

****

1-638-340-11 CONNECTOR BOARD (H3600)
1-638-336-11 CONNECTOR BOARD (H6600)
****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CONNECTOR DISPLAY

Ref. No.	Part No.	Description	Remarks
	* A-4341-562-A	DISPLAY BOARD, COMPLETE (H3600: AEP, UK)	
	* A-4341-563-A	DISPLAY BOARD, COMPLETE (H3600: G, IT)	
	* A-4341-554-A	DISPLAY BOARD, COMPLETE (H6600: AEP, UK)	
	* A-4341-556-A	DISPLAY BOARD, COMPLETE (H6600: G, IT)	
		**	
	* 4-932-810-11	CUSHION (FL)	
		(CAPACITOR)	
C601	1-124-471-00	ELECT 1000uF 20% 6.3V	
C701	1-126-177-11	ELECT 100uF 20% 10V	
C702	1-164-159-11	CERAMIC 0.1uF 50V	
C703	1-164-159-11	CERAMIC 0.1uF 50V	
C704	1-124-463-00	ELECT 0.1uF 20% 50V	
C705	1-161-494-00	CERAMIC 0.022uF 25V	
C706	1-162-203-31	CERAMIC 15PF 5% 50V	
C707	1-162-203-31	CERAMIC 15PF 5% 50V	
C710	1-164-159-11	CERAMIC 0.1uF 50V	
C711	1-126-157-11	ELECT 10uF 20% 16V	
C712	1-125-624-11	DUBLE LAYERS 0.22F 5.5V	
C713	1-136-173-00	FILM 0.47uF 5% 50V	
C714	1-136-173-00	FILM 0.47uF 5% 50V	
C715	1-136-173-00	FILM 0.47uF 5% 50V	
		(CERAMIC VIBRATOR)	
CF701	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	
		(CONNECTOR)	
CNJ601	* 1-566-859-11	SOCKET, CONNECTOR 15P	
CNJ602	* 1-564-341-11	PIN, CONNECTOR 7P	
CNJ603	* 1-564-337-00	PIN, CONNECTOR 3P	
CNJ604	* 1-565-561-11	PIN, CONNECTOR 3P	
CNJ701	* 1-564-342-11	PIN, CONNECTOR 8P	
CNJ702	* 1-564-339-00	PIN, CONNECTOR 5P	
		(DIODE)	
D701	8-719-912-20	DIODE 1SS120	
D702	8-719-912-20	DIODE 1SS120	
D707	8-719-912-20	DIODE 1SS120	
D710	8-719-301-39	DIODE SEL2210S-D (PRESET)	
D711	8-719-301-39	DIODE SEL2210S-D (TUNING)	
D712	8-719-912-20	DIODE 1SS120	
D714	8-719-912-20	DIODE 1SS120	
D715	8-719-010-28	DIODE UZ-4.3BSA	
D716	8-719-912-20	DIODE 1SS120	
D717	8-719-912-20	DIODE 1SS120	
D718	8-719-912-20	DIODE 1SS120	
		(INDICATOR)	
FLT701 ⚠	1-519-651-11	INDICATOR TUBE, FLUORESCENT	
		(IC)	
IC701	8-759-246-31	IC TMP87CK70F-6001	
IC702	8-759-500-31	IC X24C01P (H3600)	
IC702	8-759-504-12	IC X24C01S (H6600)	
IC703	8-749-920-83	IC GP1U52XB (H3600)	
IC703	8-741-100-63	IC SBX1619-51 (H6600)	
		(COIL)	
L701	1-410-521-11	INDUCTOR 100uH	
L702	1-410-521-11	INDUCTOR 100uH	
		(TRANSISTOR)	
Q701	8-729-900-80	TRANSISTOR DTC114ES	
Q702	8-729-900-80	TRANSISTOR DTC114ES	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q705	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q706	8-729-900-80	TRANSISTOR DTC114ES	
Q707	8-729-620-05	TRANSISTOR 2SC2603-EF	
		(RESISTOR)	
R601	1-249-393-11	CARBON 10 5% 1/4W	
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R702	1-249-417-11	CARBON 1K 5% 1/4W	
R703	1-249-417-11	CARBON 1K 5% 1/4W	
R704	1-249-417-11	CARBON 1K 5% 1/4W	
R705	1-249-417-11	CARBON 1K 5% 1/4W	
R706	1-249-423-11	CARBON 3.3K 5% 1/4W	
R707	1-249-423-11	CARBON 3.3K 5% 1/4W	
R708	1-249-421-11	CARBON 2.2K 5% 1/4W	
R709	1-249-423-11	CARBON 3.3K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R712	1-249-411-11	CARBON 330 5% 1/4W	
R713	1-247-887-00	CARBON 220K 5% 1/4W	
R714	1-249-429-11	CARBON 10K 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-429-11	CARBON 10K 5% 1/4W	
R717	1-249-425-11	CARBON 4.7K 5% 1/4W	
R718	1-249-429-11	CARBON 10K 5% 1/4W	
R719	1-249-429-11	CARBON 10K 5% 1/4W	
R720	1-249-429-11	CARBON 10K 5% 1/4W	
R721	1-249-429-11	CARBON 10K 5% 1/4W	
R722	1-249-429-11	CARBON 10K 5% 1/4W	
R723	1-249-423-11	CARBON 3.3K 5% 1/4W	
R724	1-249-429-11	CARBON 10K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CONNECTOR DISPLAY

Ref. No.	Part No.	Description				Remarks
R725	1-249-417-11	CARBON	1K	5%	1/4W	
R726	1-249-417-11	CARBON	1K	5%	1/4W	
R727	1-249-417-11	CARBON	1K	5%	1/4W	
R728	1-249-417-11	CARBON	1K	5%	1/4W	
R729	1-249-417-11	CARBON	1K	5%	1/4W	
R730	1-249-417-11	CARBON	1K	5%	1/4W	
R731	1-249-429-11	CARBON	10K	5%	1/4W	
R732	1-249-429-11	CARBON	10K	5%	1/4W	
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-417-11	CARBON	1K	5%	1/4W	
R736	1-249-429-11	CARBON	10K	5%	1/4W	
R737	1-249-409-11	CARBON	220	5%	1/4W	
R738	1-247-895-00	CARBON	470K	5%	1/4W	
		⟨ SWITCH ⟩				
S701	1-554-303-21	SWITCH, TACTILE (CLOCK)				
S702	1-554-303-21	SWITCH, TACTILE (TIMER CONTROL)				
S703	1-554-303-21	SWITCH, TACTILE (TIMER SET)				
S705	1-554-303-21	SWITCH, TACTILE (MEMORY NEXT)				
S706	1-554-303-21	SWITCH, TACTILE (MODE)				
S707	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)				
S708	1-554-303-21	SWITCH, TACTILE (BAND)				
S709	1-554-303-21	SWITCH, TACTILE (TUNING -)				
S710	1-554-303-21	SWITCH, TACTILE (TUNING +)				
		⟨ CRYSTAL VIBRATOR ⟩				
XT701	1-527-997-22	VIBRATOR, CRYSTAL (32kHz)				

9-956-240-21

Sony Corporation
Audio Group

English
91C1957-1
Printed in Japan

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ST-H3600/H6600

4/18

SONY.
SERVICE MANUAL

AEP Model
UK Model

CORRECTION-1

Correct your service manual as shown below.

☛ **: indicates corrected portion.**

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
25	3	X-4941-544-1	PANEL ASSY, ASSY (H3600)	X-4941-544-1	PANEL ASSY, ASSY (H3600)
		X-4942-523-1	PANEL ASSY, ASSY (H6600)	X-4941-523-1 ✓	PANEL ASSY, ASSY (H6600)

9-956-240-81

Sony Corporation
Audio Group

English
93E0958-1
Printed in Japan
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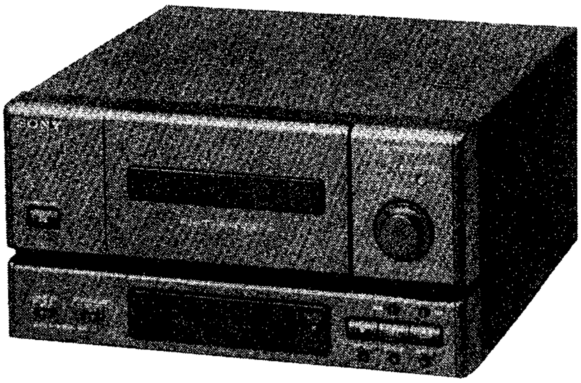
Published by Audio Sector Quality Assurance Dept.

SONY-04687

TC-H5600

SERVICE MANUAL

AEP Model
UK Model
E Model



This unit is the cassette deck for the MHC-5600 component system.

Model Name Using Similar Mechanism	TC-WR97ES/WR870
Tape Transport Mechanism Type	TCM-200R8

SPECIFICATIONS

Recoding system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF) 30 – 14,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S) 30 – 15,000 Hz (±3 dB) using TYPE II cassette 30 – 16,000 Hz (±3 dB) using TYPE IV cassette
Wow and flutter	0.06% WRMS ±0.16% (DIN)
Inputs	PHONO (phono jacks): sensitivity 5 mV impedance 47 kohms VIDEO (phono jacks) sensitivity 300 mV impedance 47 kohms

Design and specifications subject to change without notice.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

STEREO CASSETTE DECK

SONY®

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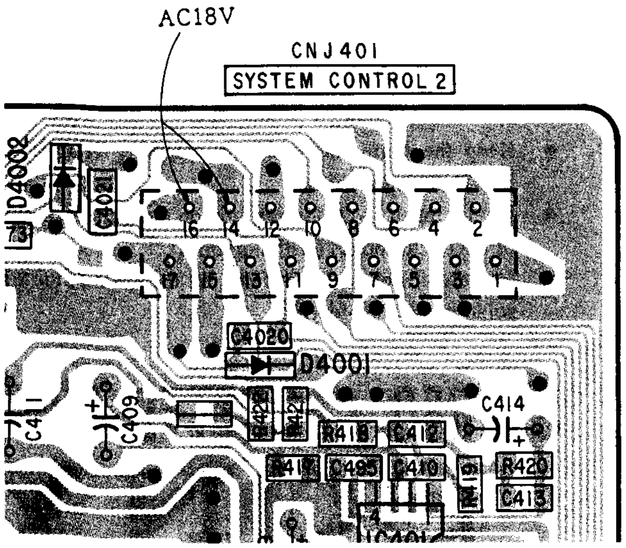
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Caution when repairing

Normally the power of this set is supplied from the TA-H5600 amplifier connected. When only this set is repaired, connect the power of 18V AC as shown in the figure below.


AC18V
CNJ401
SYSTEM CONTROL 2
D4002
16
14
12
10
8
6
4
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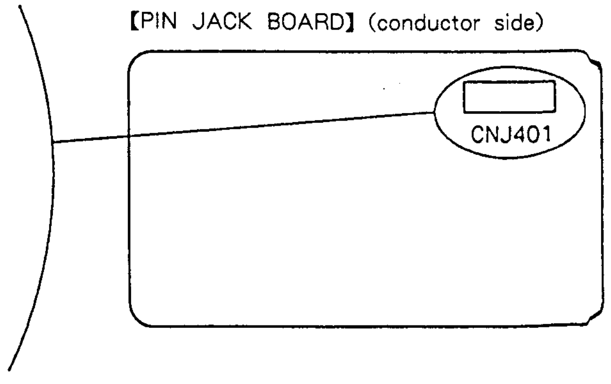
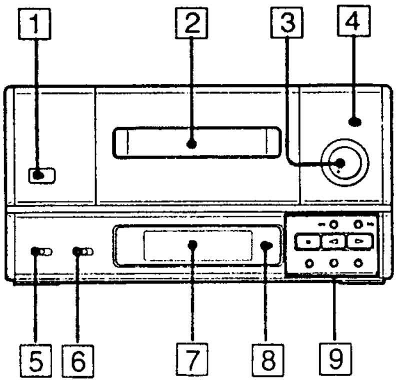
17
15
13
11
9
7
5
3
1
C4020
D4001
C409
C414
R418
C412
C425
C410
R420
C413
IC401


[PIN JACK BOARD] (conductor side)
CNJ401

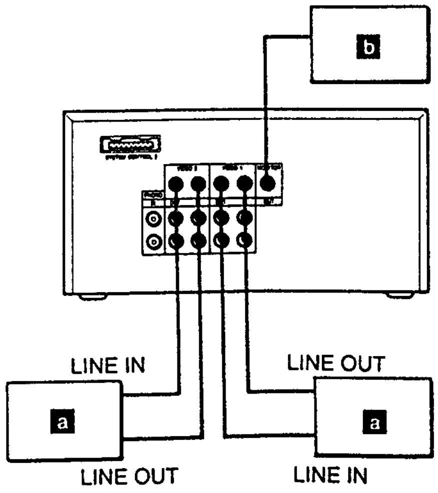
SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATION AND FUNCTION CONTROLS



1 ≙ OPEN/CLOSE button
2 Cassette holder
3 REC LEVEL (recording level) control (92)
4 AUTO REC LEVEL (automatic recording level) button (96)
5 DOLBY NR (Dolby Noise Reduction) button (64)
6 DIRECTION MODE button (62)
7 Display window
8 COUNTER RESET button
Resets the counter of the cassette deck to "0".
9 Tape operation buttons
◀◀ ▶▶ : Fast winding
■ : Stop
▷ : Forward play
◁ : Reverse play
II : PAUSE
: MUTE (Muting)
● : REC (recording)



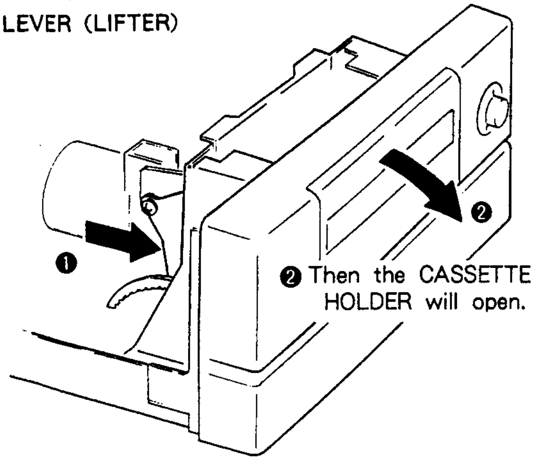
You can connect a VCR a to the VIDEO 1 or VIDEO 2 jacks. You can also connect a monitor TV b to MONITOR OUT. (TV with MONITOR IN jacks only.) To select VCR, press the VIDEO FUNCTION selector and light up the VIDEO 1 or VIDEO 2 indicator.

SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

• FRONT PANEL

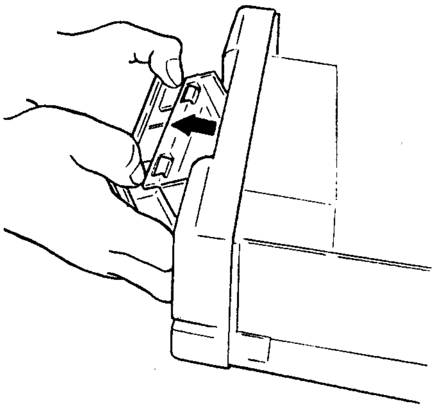
LEVER (LIFTER)



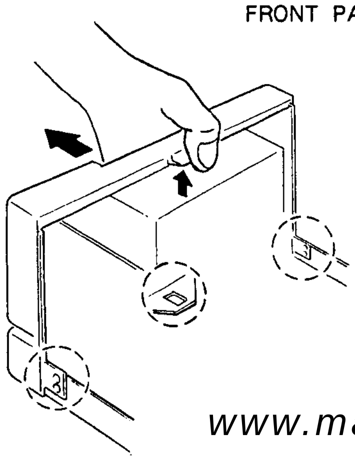
❷ Then the CASSETTE HOLDER will open.

❶ Push LEVER (LIFTER) in the direction of arrow ❶. (Refer to the item of CASSETTE HOLDER on page 5.)

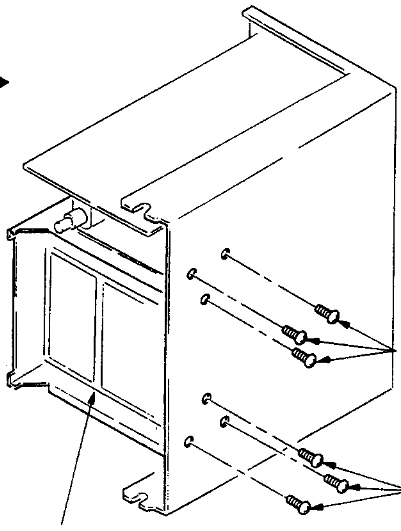
CASSETTE LID



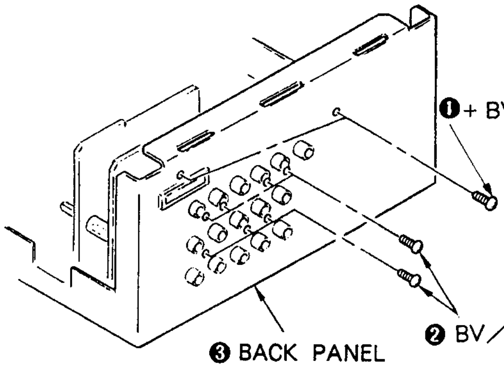
FRONT PANEL

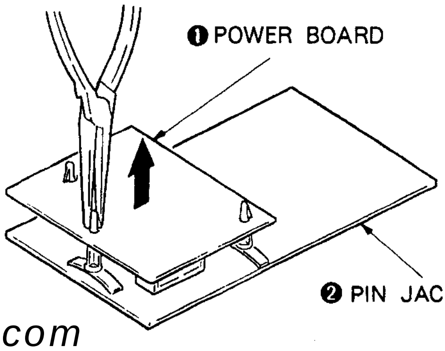


• MECHANISM DECK

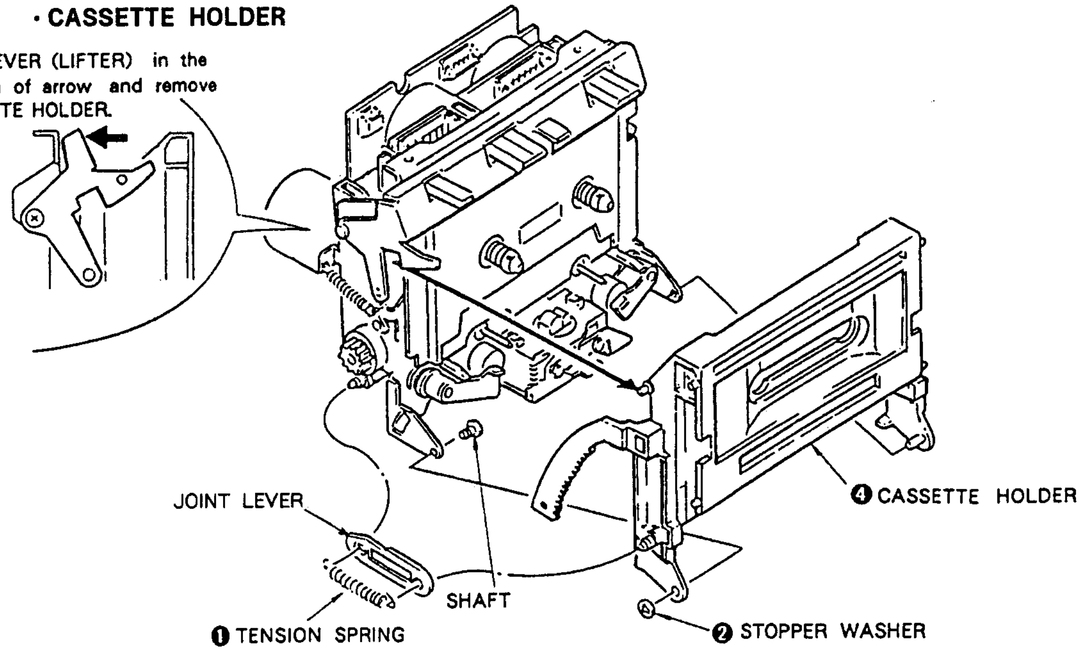

❶ + BVTP3 × 8
❶ + BVTP3 × 8
❷ MECHANISM DECK

• PIN JACK/POWER BOARD


❶+ BVTP3 × 8
❷ BV/RING
❸ BACK PANEL

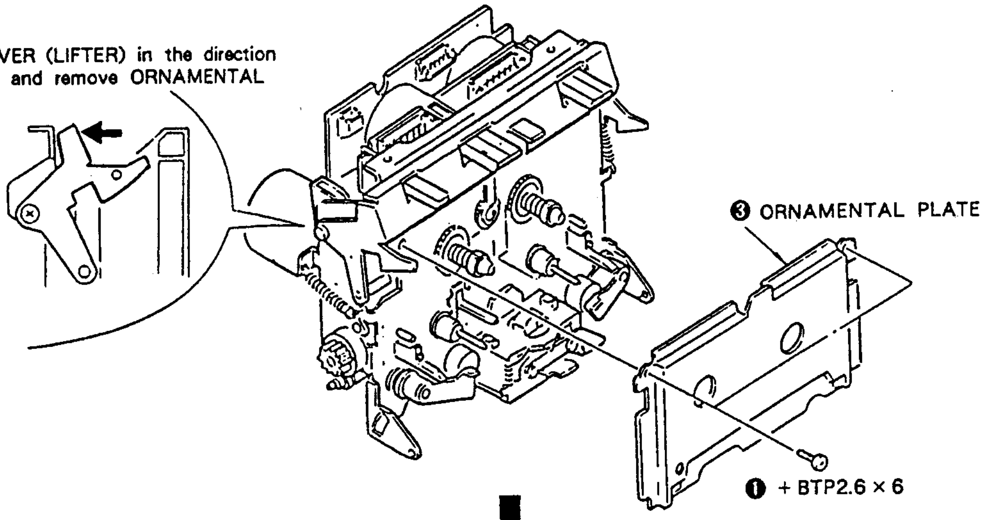

❶ POWER BOARD
❷ PIN JACK BOARD

• CASSETTE HOLDER


③ Push LEVER (LIFTER) in the direction of arrow and remove CASSETTE HOLDER.

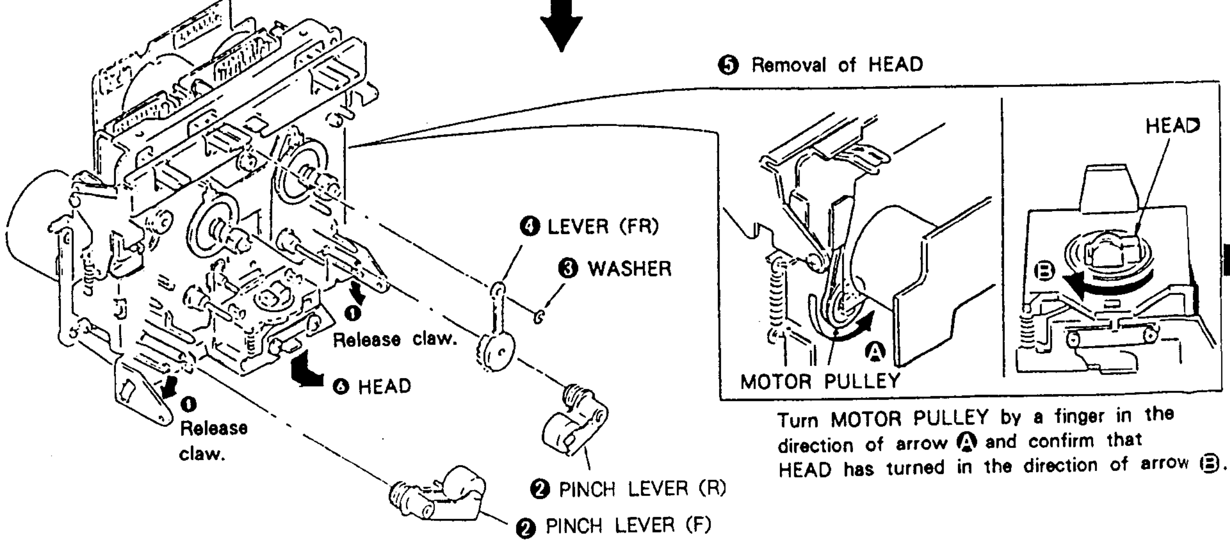
JOINT LEVER
SHAFT
① TENSION SPRING
② STOPPER WASHER
④ CASSETTE HOLDER

• ORNAMENTAL PLATE


② Push LEVER (LIFTER) in the direction of arrow and remove ORNAMENTAL PLATE.

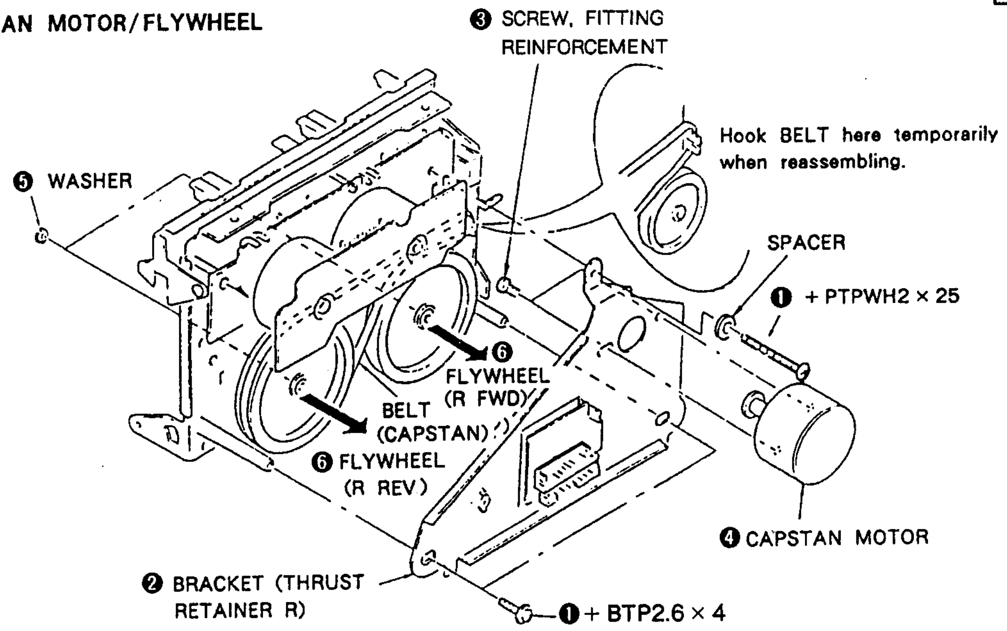
③ ORNAMENTAL PLATE
① + BTP2.6 × 6

•PINCH LEVER/HEAD

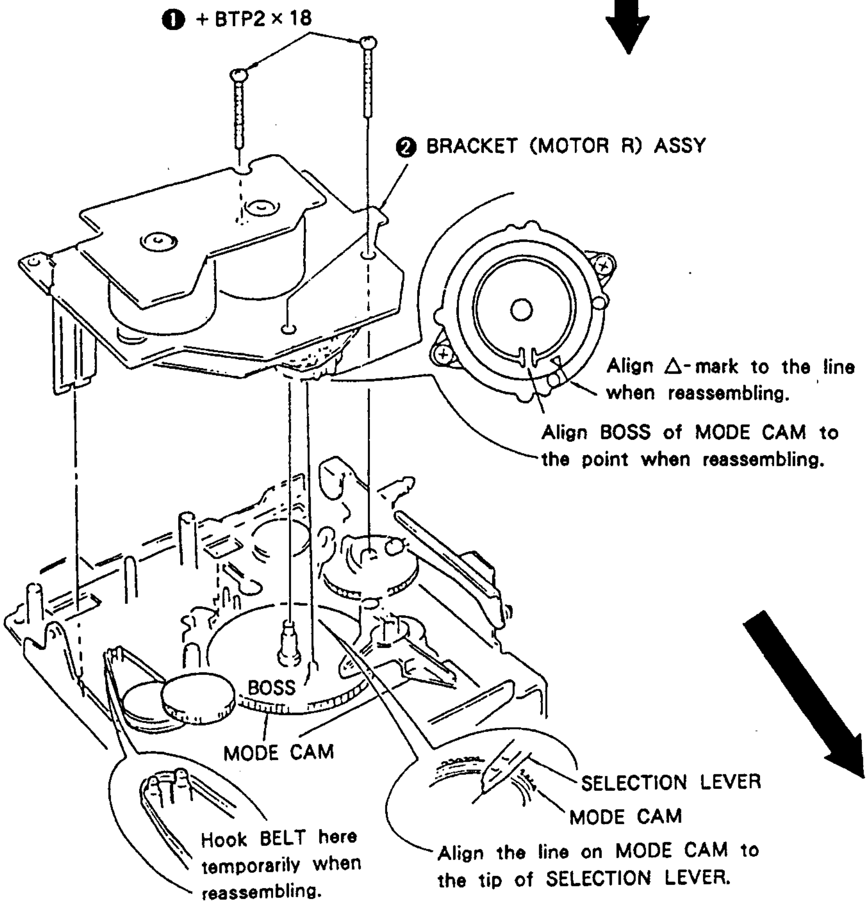

⑤ Removal of HEAD
HEAD
Ⓑ
Ⓐ
MOTOR PULLEY
④ LEVER (FR)
③ WASHER
① Release claw.
⑥ HEAD
① Release claw.
② PINCH LEVER (R)
② PINCH LEVER (F)

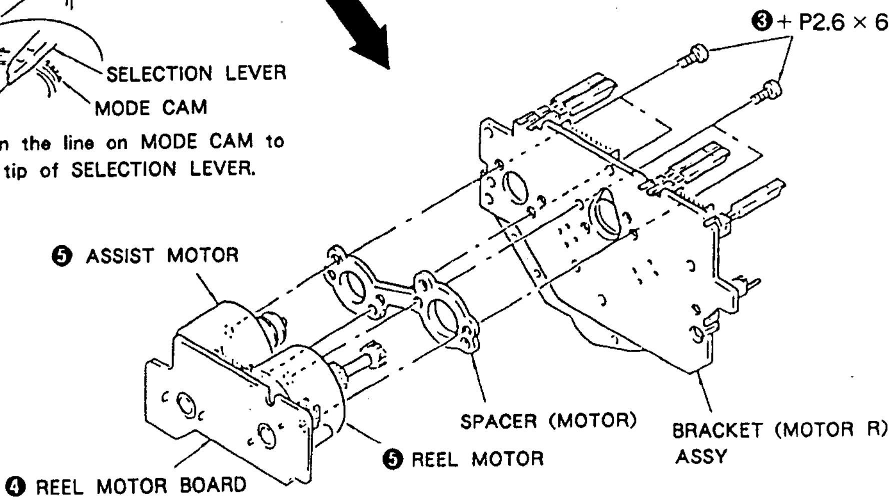
Turn MOTOR PULLEY by a finger in the direction of arrow Ⓐ and confirm that HEAD has turned in the direction of arrow Ⓑ.

CAPSTAN MOTOR/FLYWHEEL


❸ SCREW, FITTING REINFORCEMENT
Hook BELT here temporarily when reassembling.
❺ WASHER
SPACER
❶ + PTPWH2 × 25
❻ FLYWHEEL (R FWD)
BELT (CAPSTAN)
❻ FLYWHEEL (R REV)
❹ CAPSTAN MOTOR
❷ BRACKET (THRUST RETAINER R)
❶ + BTP2.6 × 4

REEL and ASSIST MOTORS


❶ + BTP2 × 18
❷ BRACKET (MOTOR R) ASSY
Align △-mark to the line when reassembling.
Align BOSS of MODE CAM to the point when reassembling.
BOSS
MODE CAM
SELECTION LEVER
MODE CAM
Hook BELT here temporarily when reassembling.
Align the line on MODE CAM to the tip of SELECTION LEVER.


❸ + P2.6 × 6
❺ ASSIST MOTOR
SPACER (MOTOR)
BRACKET (MOTOR R) ASSY
❺ REEL MOTOR
❹ REEL MOTOR BOARD

SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

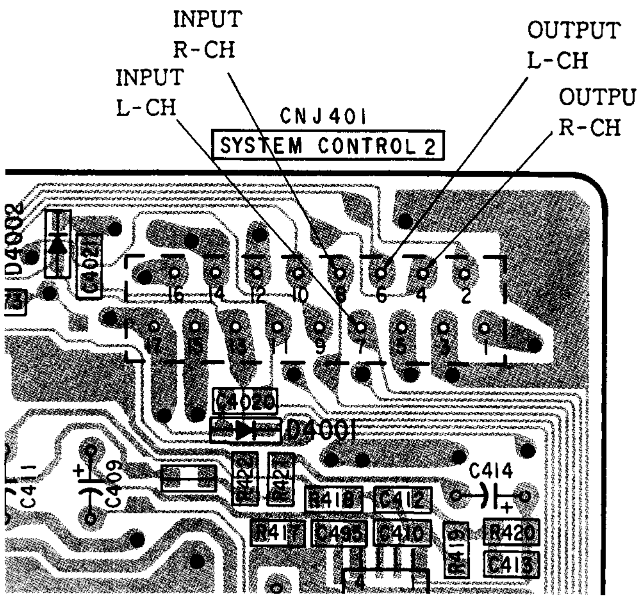
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 60g•cm (0.42to 0.83 oz•inch)
Forward back tension	CQ-102C	1 to 5g • cm (0.014 to0.069oz • inch)
Reverse	CQ-102RC	30 to 60g • cm (0.42 to 0.83oz • inch)
Reverse back tension	CQ-102RC	1 to 5g • cm (0.014 to0.069oz • inch)
Forward, Reverse	CQ-201B	65 to 90g•cm (0.9 to 1.25 oz•inch)

LINE IN/OUT Terminal (CNJ401)


INPUT
R-CH
INPUT
L-CH
CNJ401
SYSTEM CONTROL 2
OUTPUT
L-CH
OUTPUT
R-CH
D4002
C4021
16
14
12
10
8
6
4
2
15
13
11
9
7
5
3
1
C4026
D4001
C411
C409
R422
R421
C414
R418
C412
R417
C495
C410
R419
R420
C413

SECTION 4
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   - Switch position
     DOLBY NR switch : OFF
     DIR MODE switch : ⇄

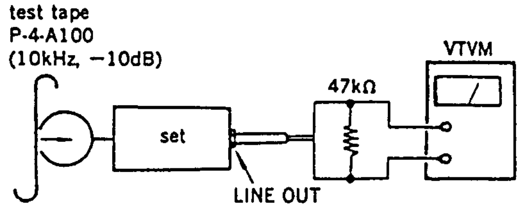
Test Tape

Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

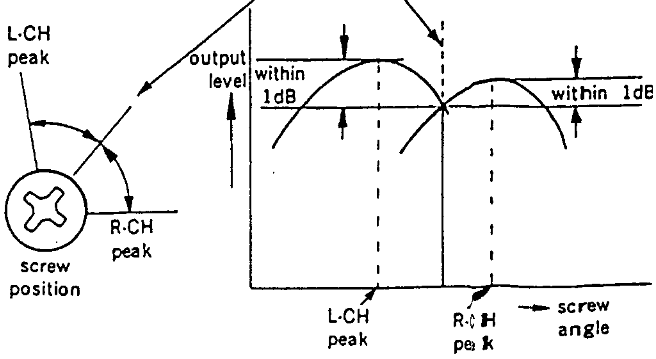
Record/Playback Head Azimuth Adjustment

Procedure:

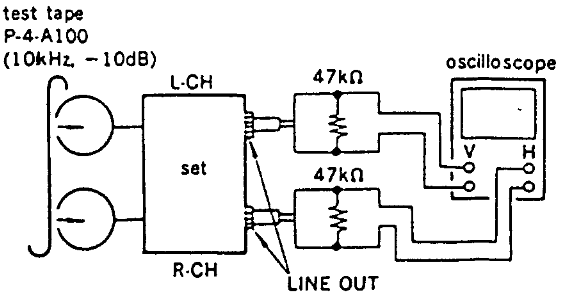
1. Forward Playback Mode

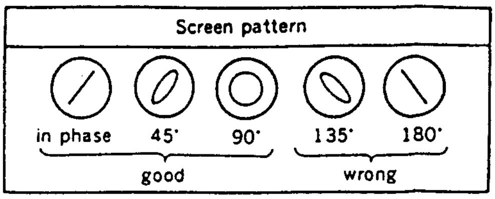

test tape
P-4-A100
(10kHz, −10dB)
VTVM
47kΩ
set
LINE OUT

2. Turn the adjustment screw for the maximum output levels. If these levels do notmatch, turn the adjustment screw until both of output levels match together within 1dB.



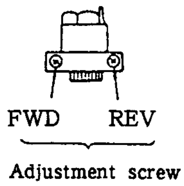
3. Playback Mode


test tape
P-4-A100
(10kHz, −10dB)
L-CH
47kΩ
oscilloscope
set
V
H
47kΩ
R-CH
LINE OUT


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

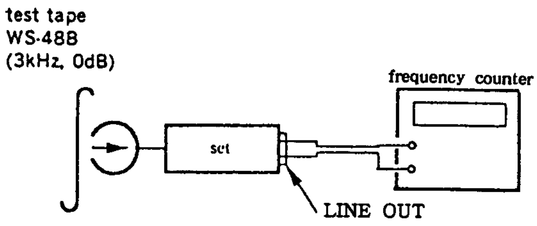
Adjustment Location : − record/playback head −


FWD
REV
Adjustment screw

Tape Speed Adjustment

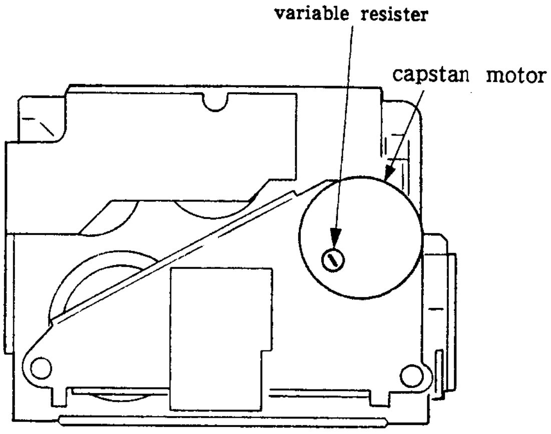
Procedure :

—Forward Playback Mode—


test tape
WS-48B
(3kHz, 0dB)
frequency counter
set
LINE OUT

1. Set to FWD playback mode.
2. Adjust motor rear side (variable resistor) so that the frequency counter reading becomes 3,000 ± 15Hz.

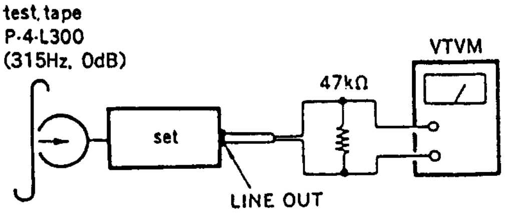
Adjustment Location : − capstan motor −


variable resister
capstan motor

Playback Level Adjustment

Procedure:

—Forward Playback Mode—


test. tape
P-4-L300
(315Hz, 0dB)
set
47kΩ
VTVM
LINE OUT

Adjustment RV101 (L-ch) and RV201 (R-ch) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limit:

LINE OUT level: −10 ± 0.5dB (0.23 to 0.26V)

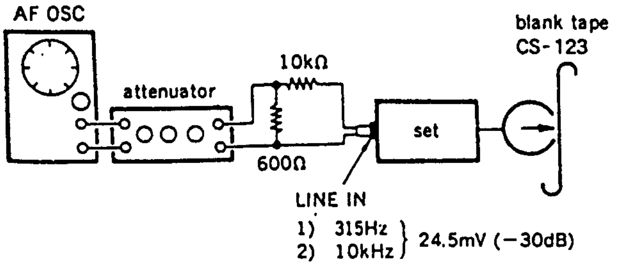
Level Difference between Channels: within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

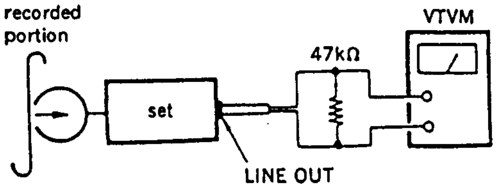
Record Bias Adjustment

Procedure:

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE IN
1) 315Hz
2) 10kHz
24.5mV (−30dB)

2. Playback Mode

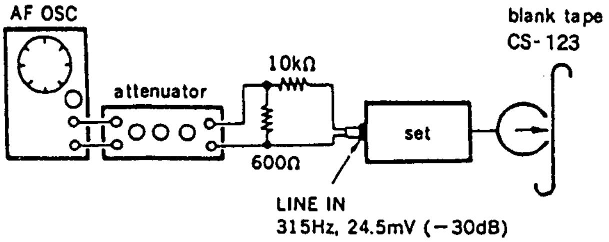

recorded
portion
set
47kΩ
VTVM
LINE OUT

Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust RV103 (L-CH), RV203 (R-CH) and repeat the steps given above.

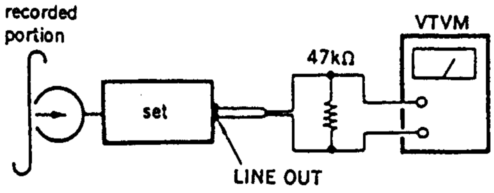
Record Level Adjustment

Procedure:

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE IN
315Hz, 24.5mV (−30dB)

2. Playback Mode


recorded
portion
set
47kΩ
VTVM
LINE OUT

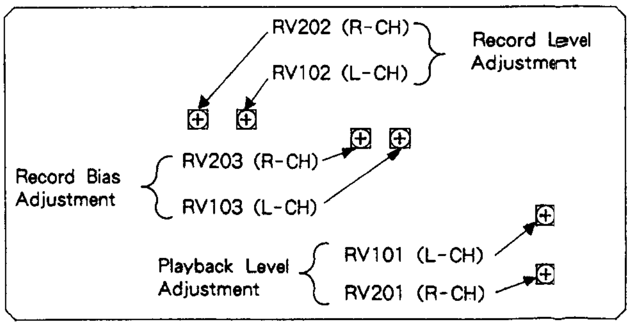
Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV102 (L-CH), RV202 (R-CH) and repeat steps 1 and 2.

Adjustment Limits:

LINE OUT level: −30 ± 0.5dB (23 to 26mV)

Adjustment Location:

【MAIN (B) BOARD】 – component side –


RV202 (R-CH)
RV102 (L-CH)
Record Level
Adjustment
Record Bias
Adjustment
RV203 (R-CH)
RV103 (L-CH)
Playback Level
Adjustment
RV101 (L-CH)
RV201 (R-CH)

SECTION 5
DIAGRAMS

5-1. IC PIN DESCRIPTION

IC601 display microprocessor HD614023FA89

Fluorescent lamp indicator is activated by receiving data from IC702 (system controller).

Pin	Pin Name	I/O	Description
1~11	k-a	O	FL indicator tube(FL601)segment output.
12			Not used(+5.6 V).
13	VDISP	—	Power supply for activating the FL indicator tube(-22 V).
14~25		I	Not used(GND).
26	Vcc	—	Power supply terminal(+5.6 V).
27	CLK	I	Data transmission clock input from IC702(system controller).
28	DATA	I	Serial data input from IC702(system controller).
29	SYNC	I	Sync signal input which indicates the first byte of data sent from IC702(system controller).
30			Not used(GND).
31	SAF	O	LED(D601)light output in the AUTO REL LEVEL.
32~35		O	Not used.
36~42			Not used(GND).
43	RESET	I	Reset input from IC702(system controller). "L": Reset.
44	TEST	I	Not used(+5.6V).
45	OSC1	I	Clock input(4.19MHz).
46	OSC2	O	Clock output.
47	GND	—	Power supply terminal(GND).
48~50			Not used(GND).
51			Not used(Pull-up).
52			Not used.
53~57	1G-5G	O	FL indicator tube(FL601)grid output.
58~59		O	Not used.
60~64	p-l	O	FL indicator tube(FL601)segment output.

IC406 selector controller M50760-315FP

AV output is switched with the audio bus signal sent from the amplifier (TA-H5600).

Pin	Pin Name	I/O	Description
1	D3	I	Model selection input port. Connected to GND.
2	A0	O	Audio IN switch(IC403 and IC404)control output port.
3			Not used.
4	A1	O	Audio IN switch(IC403 and IC404)control output port.
5	CNVss	—	Power supply terminal(GND).
6	Vss	—	Power supply terminal(GND).
7	A2	O	Audio IN switch(IC403 and IC404)control output port.
8	B0	O	Audio OUT switch(IC405)control output port.
9	B1	O	Audio OUT switch(IC405)control output port.
10			Not used.
11	V0	O	Video IN/OUT switch(IC407)control output port.
12	V1	O	Video IN/OUT switch(IC407)control output port.
13~14			Not used(GND).
15			Not used.
16	RESET	I	Reset input. "L": Reset
17	XOUT	O	Clock output.
18	XIN	I	Clock input.
19	S	I	Serial data input(audio bus).
20	D0	I	Serial data input(audio bus).
21	D1	I	Model selection input port. Connected to +5 V(pull up).
22			Not used.
23	D2	I	Model selection input port. Connected to GND.
24	V_{DD}	—	Power supply terminal(+5 V).

IC702 system controller M50944-155SP

The system is wholly controlled by communication between IC601 (display microprocessor) and IC701 (mechanism controller).

Pin No.	Pin Name	I/O	Description
1	VREF	I	A/D input port reference voltage input(+5.6 V).
2	MET - R	I	Level meter Rch input(analog)from the meter amplifier(IC305).
3	MET - L	I	Level meter Lch input(analog)from the meter amplifier(IC305).
4	VOL A/D	I	REC LEVEL VOLUME(RV301)position detect input(analog).
5		—	Not used.
6	KEY4	I	Key switch input(analog).
7	KEY3	I	Key switch input(analog).
8	KEY2	I	Key switch input(analog).
9	KEY1	I	Key switch input(analog).
10	SYNC	O	Sync signal output which indicates the first byte of data sent to IC601.
11	FL SK	O	Data transmission clock output to IC601.
12	FL SO	O	Serial data output to IC601.
13	AUB OUT	O	Audio bus output.
14	AUB IN	I	Audio bus output(negative edge).
15	POW IN	I	Not used(pull up).
16	PB SEL	O	Not used(open).
17	AMS SEL	O	Not used(open).
18	MD REQ	I	Data request input from IC701.
19	MD SCLK	O	Data transmission clock output to IC701.
20	MD SO	O	Serial data output to IC701.
21	MD SI	I	Serial data input from IC701.
22	RES OUT	O	Reset signal output to IC601.
23		—	Not used(open).
24	AUB IN	I	Audio bus input(positive edge).
25		—	Not used(open).
26	GND	—	Power supply terminal(GND).
27	RES	I	System reset input. "L": Reset.
28	XIN	I	Clock input(4 MHz).
29	XOUT	O	Clock output.
30,31		—	Not used(open).
32	Vss	—	Power supply terminal(GND).
33	φ	—	Not used(open).
34	TEST 2	I	Test mode setting input. This set enters into the test mode when the power is on and it is set to "L"(CNP703 is shortened) *1
35	TEST 1	I	Not used(GND).
36,37	VERSEL	I	Not used(+5.6 V).
38		—	Not used(open).
39	POW ON	I	Not used(GND).
40	VOL LED	O	Volume LED ON/OFF output. "L": light up.
41	VOL -	O	Volume moter(RV301)down control output for IC706.
42	VOL +	O	Volume moter(RV301)up control output for IC706.
43	VOL SPD	O	Volume moter speed control output. "H": SLOW, "L": FAST.
44~47		O	Not used(open).
48	BIAS 4	O	Tape bias select output. "L": Metal.
49	BIAS 2	O	Tape bias select output. "L": CrO2.
50	BIAS 1	O	Tape bias select output. "L": Normal.
51	RMUTE	O	REC mute control output.
52		O	Not used(open).
53	RELAY	O	Mechanism deck head switch control output. "L": Relay on.
54		O	Not used(open).

Pin No.	Pin Name	I/O	Description
55	B/C	O	Dolby B/C control output. "L": Dolby C, "H": Dolby B.
56	ON/OFF	O	Dolby ON/OFF control output. "C": ON, "H": OFF
57	REC/PB	O	Dolby amplifier REC/PB control output. "L": REC, "H": PB.
58	PB70µs	O	Playback equalizer characteristic switch output. "H": Normal, "L": CrO2 or Metal.
59	AMS IN	O	Signal input from the AMS amplifier(IC304). With music: "H", No music: "L".
60	AMS/BS	O	Not used.
61	PASS	O	Not used(connect to (62) pin).
62	L MUTE	O	Line mute control output. "H": MUTE.
63	AVcc	O	Power supply terminal(+5.6 V).
64	Vcc	O	Power supply terminal(+5.6 V).

*1 Test mode
When the power is on and pin ㉞ is set to "L"(CNP703 is shortened.), the set enters the electrical adjustment test mode and the followings can be available.

(1) Source monitor
Recording signals can be monitored through the LINE OUT terminal(see page 7) because the line short is removed in recording.

(2) Recording memory
Recording memory is set to ON when the tape counter is reset at the record start point.

IC701 mechanism controller M50747-B83SP

The mechanism deck is controlled by receiving data from IC702 (system controller).

Pin No.	Pin Name	I/O	Description
1	Vcc	—	Power supply terminal(+5.6 V).
2	BCTRQ	O	Assist motor torque control output. "H": Large torque "L": Small torque
3	SPEED	O	Not used(open).
4	TYPE 1	O	REC EQ select output. NORMAL tape: "H"
5	TYPE 2	O	REC EQ select output. CrO2 tape: "H"
6～9		O	Not used.
10	$\overline{\text{REVTAB}}$	I	REC switch(reverse:S1009)input. "H": When REC claw is broken.
11	$\overline{70\mu s}$	I	70µswitch(S1008)input. "H": 70µs, "L": 120µs(time constant of playback EQ).
12	$\overline{\text{METAL}}$	I	METAL switch(S1007)input. "H": METAL tape, "L": NORMAL or CrO2 tape.
13	$\overline{\text{HALF}}$	I	HALF switch(S1006)input. "L": When a tape is mounted.
14	S REEL	I	Supply reel base sensor(IC1001)input.
15	T REEL	I	Take-up reel base sensor(IC1002)input.
16,17		I	Not used(GND).
18		—	Not used(open).
19	SCLK	I	Data transmission clock input from IC702.
20	SO	O	Serial data output to IC702.
21	SI	I	Serial data input from IC702.
22	REQ	O	Data request output to IC702.
23～25		—	Not used(open).
26	$\overline{\text{INT}}$	I	Not used(+5.6 V).
27	CN Vss	—	Power supply terminal(GND).
28	$\overline{\text{RES}}$	I	Reset input. "L": Reset.
29	XIN	I	Clock input(4 MHz).
30	XOUT	O	Clock output.
31	ϕ		Not used.
32	Vss	—	Power supply terminal(GND).
33～50			Not used.

Pin No.	Pin Name	I/O	Description
51	ASSIST1	O	Head base is"H" when turned to the FWD direction. *1
52	ASSIST2	O	Head base is"H" when turned to the RVS direction.
53	REEL 1	O	Reel motor rotation control output. Reverse: "H" *2
54	REEL 2	O	Reel motor rotation control output. Forward: "H"
55	TQ1	O	Reel motor torque control output. PLAY: "H" *3
56	TQ2	O	Reel motor torque control output. FF/REW: "H"
57~60	CAM1-4	I	Rotary encoder input to detect the position of the head base of the mechanical block. *4
61	$\overline{\text{OPEN}}$	I	OPEN switch(S1004)input. "L": When the cassette holder completely opens.
62	$\overline{\text{CLOSE}}$	I	CLOSE switch(S1003)input. "L": When the cassette holder completely closed.
63	$\overline{\text{DOOR}}$	I	DOOR switch(S1002)input. "L": When the cassette holder is driven from open to close state.
64	$\overline{\text{FWDTAB}}$	I	REC switch (forward : S1005) input. "H" : When REC claw is broken.

*1

	STOP	Turn to FWD directiom	Turn to RVS direction	STOP
$\overline{\text{ASSIST 1}}$	L	H	L	H
$\overline{\text{ASSIST 2}}$	L	L	H	H

*2

	STOP	FWD/CLOSE	REV/OPEN	BRAKE
REEL 1	L	L	H	H
REEL 2	L	H	L	H

*3

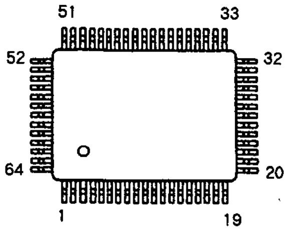
	OPEN/CLOSE (large torque)	FF/REW (medium torque)	PLAY (small torque)	INHIBIT
TQ 1	L	L	H	H
TQ 2	L	H	L	H

*4

	Forward					Reverse			
	FWD PLAY	AMS/PAUSE	STOP	FF/REW	EJECT	FF/REW	STOP	AMS/PAUSE	RVS PLAY
CAM1	H	H	L	H	L	H	L	H	H
CAM2	H	L	H	H	L	H	H	L	H
CAM3	H	H	H	H	H	L	L	L	L
CAM4	H	H	H	L	L	L	H	H	H

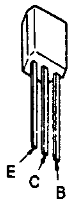
5-2. SEMICONDUCTOR LEAD LAYOUTS

HD614023FA89

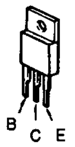

51
33
52
32
64
20
1
19

(TOP VIEW)

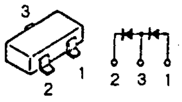
DTA114ES
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SA1344



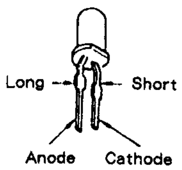
2SB1094-L
2SD2012



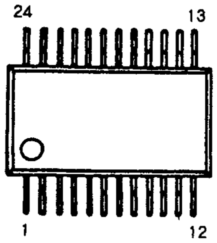
DCA010



SEL2210S-C

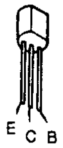

Long
Short
Anode
Cathode

M50760-315FP

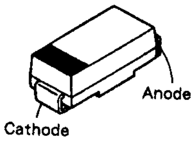


(TOP VIEW)

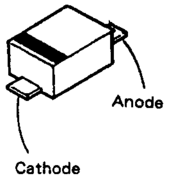
2SC945-P
2SC3330-T



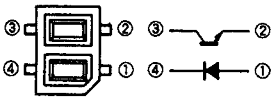
EC10DS2


Anode
Cathode

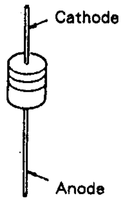
1SS355


Anode
Cathode

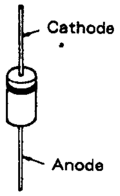
GP2S22B



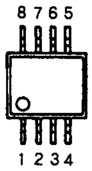
HZS7C2L
RD5.6ESB2
1SS120


Cathode
Anode

10E2N

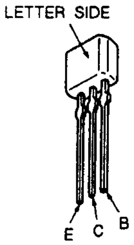

Cathode
Anode

M5218AFP

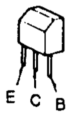


(TOP VIEW)

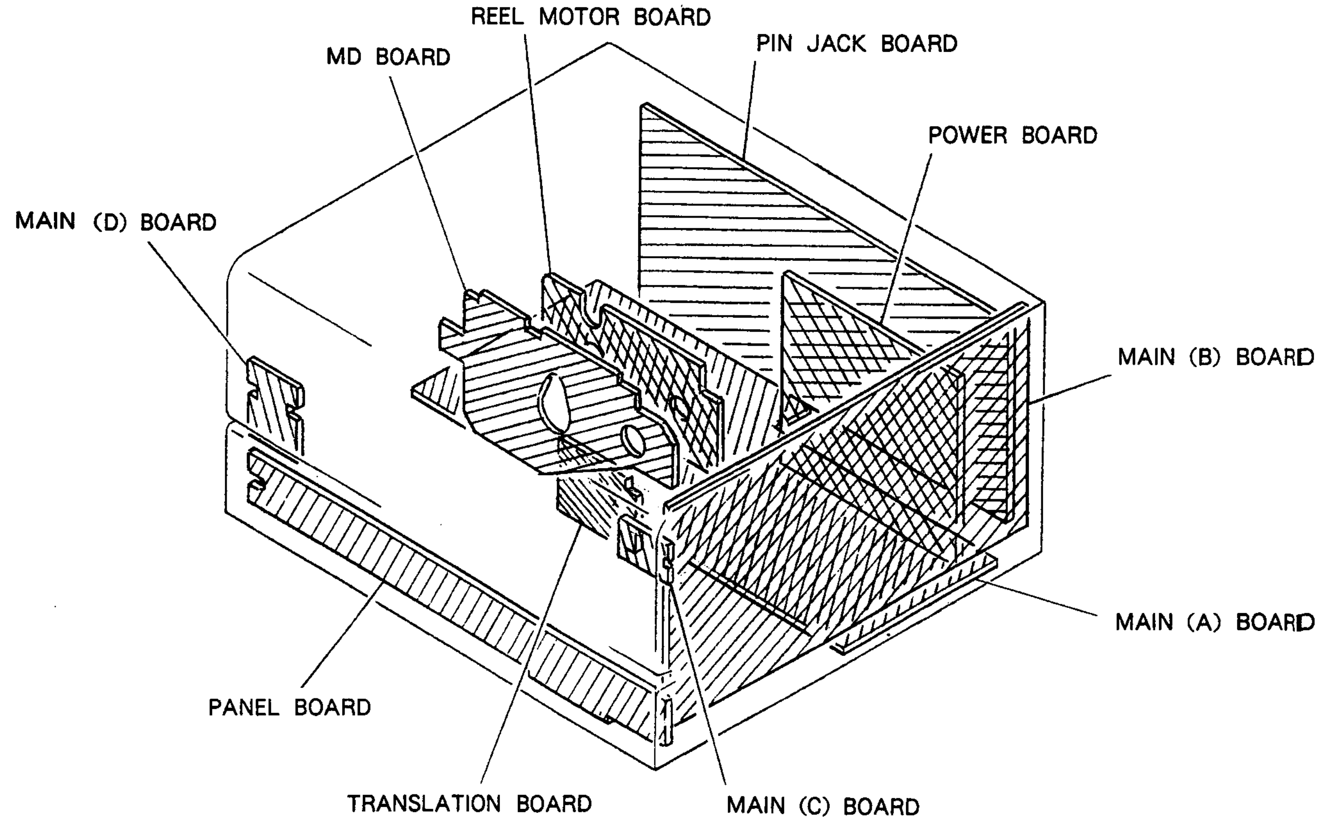
2SA1317-STN
2SD1012-FG


LETTER SIDE
E
C
B

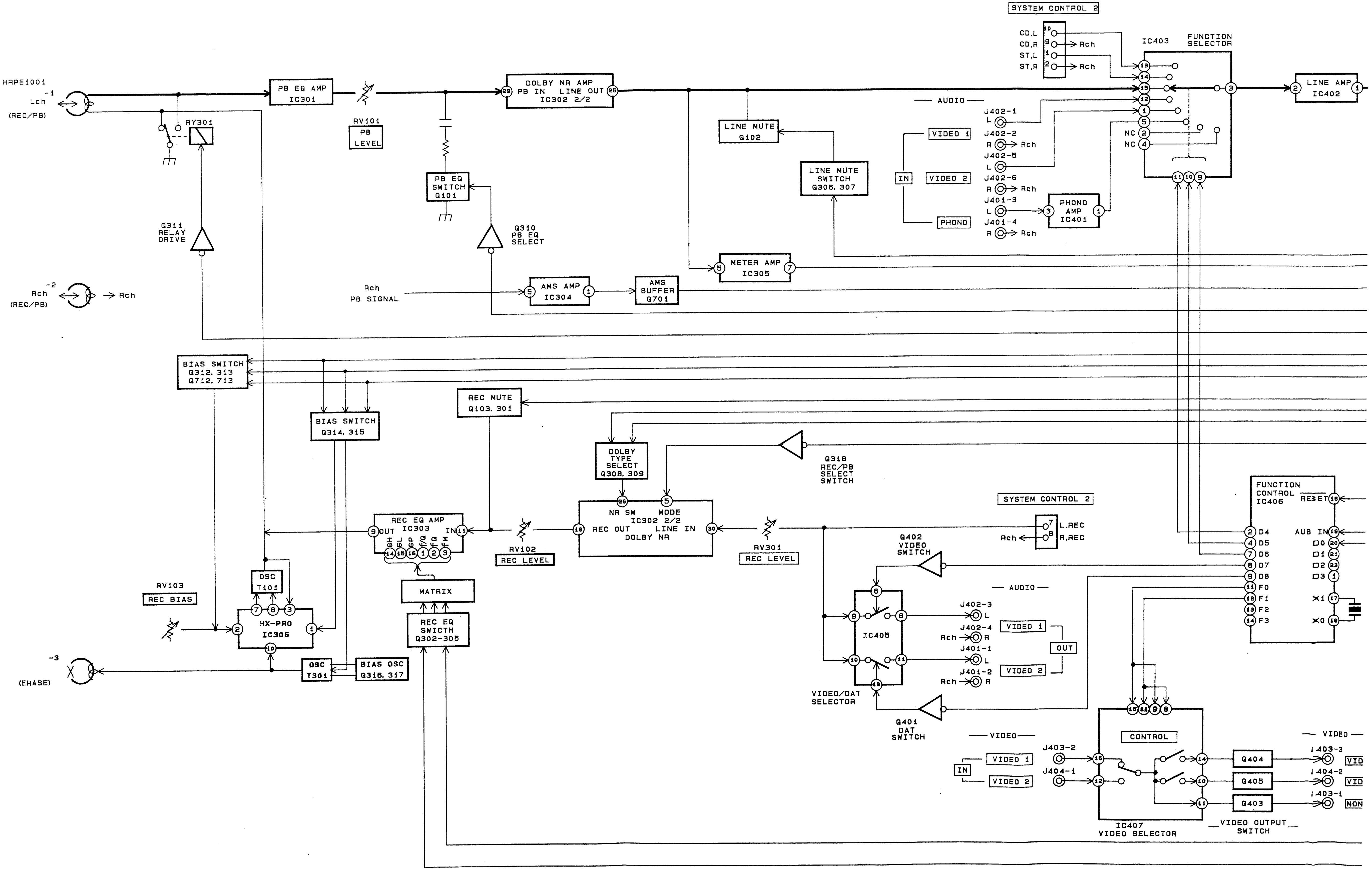
2SD774-34



5-3. CRICUIT BOARDS LOCATION

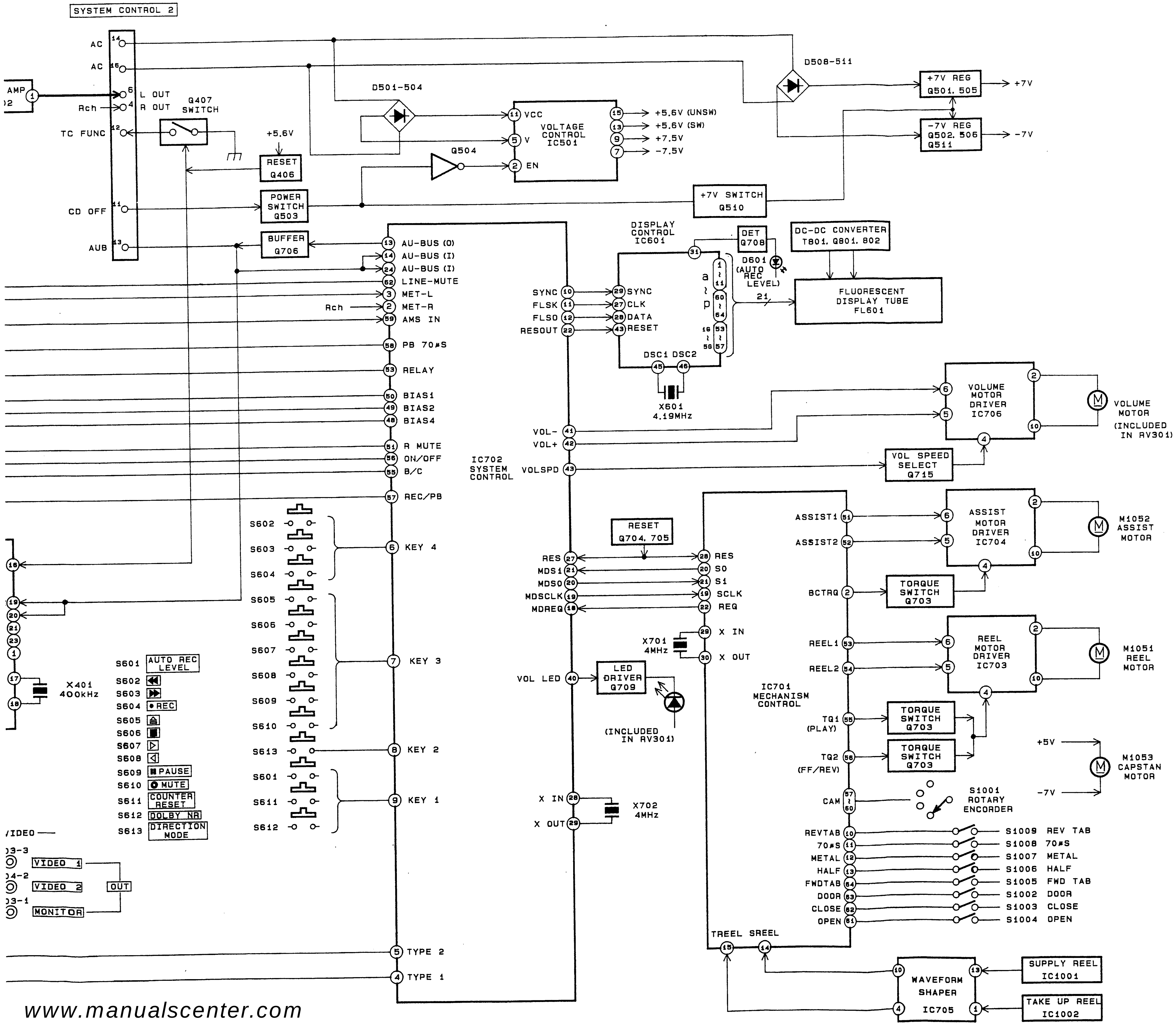

REEL MOTOR BOARD
MD BOARD
PIN JACK BOARD
POWER BOARD
MAIN (D) BOARD
MAIN (B) BOARD
MAIN (A) BOARD
PANEL BOARD
TRANSLATION BOARD
MAIN (C) BOARD

5-4. BLOCK DIAGRAM



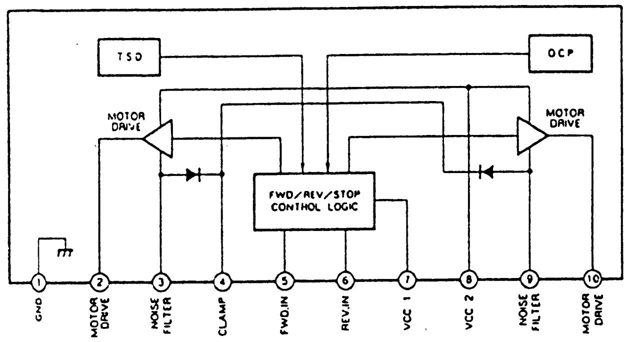
HAPE1001
-1
Lch
(REC/PB)
RY301
Q311
RELAY
DRIVE
-2
Rch
(REC/PB)
Rch
PB EQ AMP
IC301
RV101
PB
LEVEL
PB EQ
SWITCH
Q101
Q310
PB EQ
SELECT
DOLBY NR AMP
PB IN LINE OUT
IC302 2/2
LINE MUTE
Q102
LINE MUTE
SWITCH
Q306, 307
METER AMP
IC305
Rch
PB SIGNAL
AMS AMP
IC304
AMS
BUFFER
Q701
SYSTEM CONTROL 2
CD.L
CD.R
ST.L
ST.R
Rch
IC403
FUNCTION
SELECTOR
LINE AMP
IC402
AUDIO
J402-1
L
J402-2
R
J402-5
L
J402-6
R
J401-3
L
J401-4
R
VIDEO 1
IN
VIDEO 2
PHONO
PHONO
AMP
IC401
NC
NC
BIAS SWITCH
Q312, 313
Q712, 713
BIAS SWITCH
Q314, 315
REC MUTE
Q103, 301
DOLBY
TYPE
SELECT
Q308, 309
Q318
REC/PB
SELECT
SWITCH
REC EQ AMP
IC303
OUT
IN
GH
GL
GP
fQ
fQ
fM
RV102
REC LEVEL
NR SW
MODE
IC302 2/2
REC OUT
LINE IN
DOLBY NR
RV301
REC LEVEL
SYSTEM CONTROL 2
L.REC
R.REC
Rch
FUNCTION
CONTROL
IC406
RESET
AUB IN
D4
D5
D6
D7
D8
F0
F1
F2
F3
D0
D1
D2
D3
X1
X0
RV103
REC BIAS
OSC
T101
HX-PRO
IC306
MATRIX
REC EQ
SWICTH
Q302-305
-3
(EHASE)
OSC
T301
BIAS OSC
Q316, 317
Q402
VIDEO
SWITCH
IC405
VIDEO/DAT
SELECTOR
Q401
DAT
SWITCH
AUDIO
J402-3
L
J402-4
R
J401-1
L
J401-2
R
Rch
VIDEO 1
OUT
VIDEO 2
VIDEO
IN
VIDEO 1
VIDEO 2
J403-2
J404-1
CONTROL
IC407
VIDEO SELECTOR
Q404
Q405
Q403
VIDEO OUTPUT
SWITCH
VIDEO
J403-3
J404-2
J403-1
VID
VID
MON

16

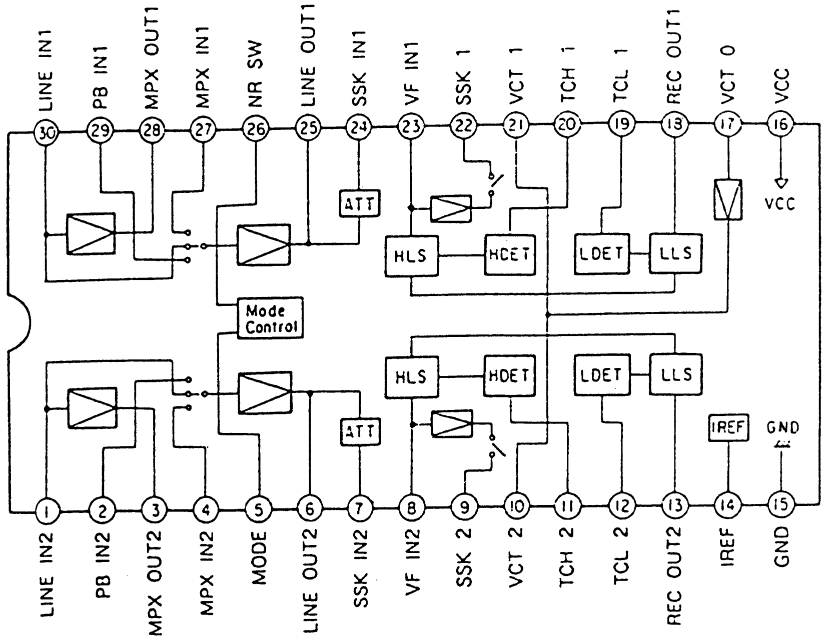

SYSTEM CONTROL 2
AC
AC
AMP
L OUT
Rch
R OUT
Q407 SWITCH
TC FUNC
+5.6V
RESET Q406
CD OFF
POWER SWITCH Q503
AUB
BUFFER Q706
D501-504
VCC
VOLTAGE CONTROL IC501
V
EN
Q504
+5.6V (UNSW)
+5.6V (SW)
+7.5V
-7.5V
D508-511
+7V REG Q501, 505
+7V
-7V REG Q502, 506 Q511
-7V
+7V SWITCH Q510
AU-BUS (O)
AU-BUS (I)
AU-BUS (I)
LINE-MUTE
MET-L
MET-R
AMS IN
PB 70μS
RELAY
BIAS1
BIAS2
BIAS4
R MUTE
ON/OFF
B/C
REC/PB
KEY 4
KEY 3
KEY 2
KEY 1
TYPE 2
TYPE 1
S602
S603
S604
S605
S606
S607
S608
S609
S610
S613
S601
S611
S612
S601 AUTO REC LEVEL
S602 ◀◀
S603 ▶▶
S604 ● REC
S605 ⏏
S606 ■
S607 ▷
S608 ◁
S609 ⏸ PAUSE
S610 ⊘ MUTE
S611 COUNTER RESET
S612 DOLBY NR
S613 DIRECTION MODE
X401 400kHz
VIDEO
VIDEO 1
VIDEO 2
MONITOR
OUT
IC702 SYSTEM CONTROL
SYNC
FLSK
FLSO
RESOUT
VOL-
VOL+
VOLSPD
RES
MDS1
MDS0
MDSCLK
MDREQ
VOL LED
X IN
X OUT
X702 4MHz
DISPLAY CONTROL IC601
SYNC
CLK
DATA
RESET
DSC1 DSC2
X601 4.19MHz
DET Q708
D601 (AUTO REC LEVEL)
a
p
21
DC-DC CONVERTER T801, Q801, 802
FLUORESCENT DISPLAY TUBE FL601
VOLUME MOTOR DRIVER IC706
VOLUME MOTOR (INCLUDED IN RV301)
VOL SPEED SELECT Q715
RESET Q704, 705
LED DRIVER Q709
(INCLUDED IN RV301)
X701 4MHz
RES
SO
S1
SCLK
REQ
X IN
X OUT
IC701 MECHANISM CONTROL
ASSIST1
ASSIST2
BCTRQ
REEL1
REEL2
TQ1 (PLAY)
TQ2 (FF/REV)
CAM
ASSIST MOTOR DRIVER IC704
M1052 ASSIST MOTOR
TORQUE SWITCH Q703
REEL MOTOR DRIVER IC703
M1051 REEL MOTOR
TORQUE SWITCH Q703
TORQUE SWITCH Q703
+5V
-7V
M1053 CAPSTAN MOTOR
S1001 ROTARY ENCORDER
REVTAB
70μS
METAL
HALF
FWDTAB
DOOR
CLOSE
OPEN
S1009 REV TAB
S1008 70μS
S1007 METAL
S1006 HALF
S1005 FWD TAB
S1002 DOOR
S1003 CLOSE
S1004 OPEN
TREEL SREEL
WAVEFORM SHAPER IC705
SUPPLY REEL IC1001
TAKE UP REEL IC1002

• IC BLOCK DIAGRAM

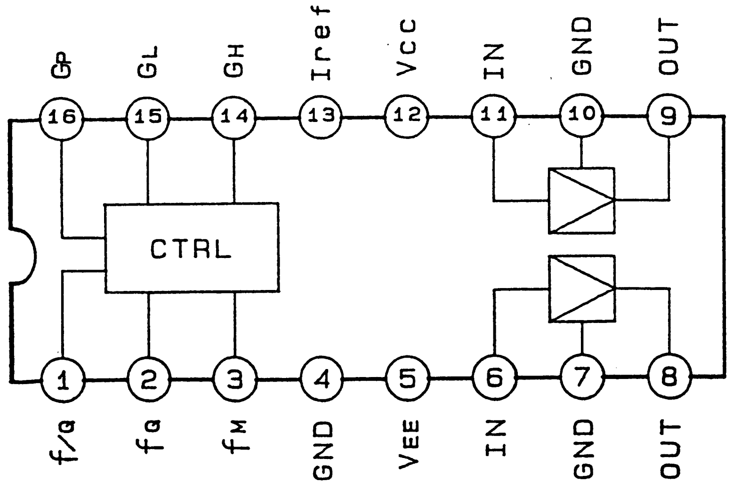
IC703,706 BA6219B
IC704 LB1641


TSD
OCP
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTHOL LOGIC
1 GND
2 MOTOR DRIVE
3 NOISE FILTER
4 CLAMP
5 FWD.IN
6 REV.IN
7 VCC 1
8 VCC 2
9 NOISE FILTER
10 MOTOR DRIVE

IC302 CXA1330S


30 LINE IN1
29 PB IN1
28 MPX OUT1
27 MPX IN1
26 NR SW
25 LINE OUT1
24 SSK IN1
23 VF IN1
22 SSK 1
21 VCT 1
20 TCH 1
19 TCL 1
18 REC OUT1
17 VCT 0
16 VCC
VCC
ATT
HLS
HCET
LDET
LLS
Mode Control
HLS
HDET
LDET
LLS
ATT
IREF
GND
1 LINE IN2
2 PB IN2
3 MPX OUT2
4 MPX IN2
5 MODE
6 LINE OUT2
7 SSK IN2
8 VF IN2
9 SSK 2
10 VCT 2
11 TCH 2
12 TCL 2
13 REC OUT2
14 IREF
15 GND

IC303 CXA1198AP


16 GP
15 GL
14 GH
13 Iref
12 Vcc
11 IN
10 GND
9 OUT
CTRL
1 f/Q
2 fQ
3 fM
4 GND
5 VEE
6 IN
7 GND
8 OUT

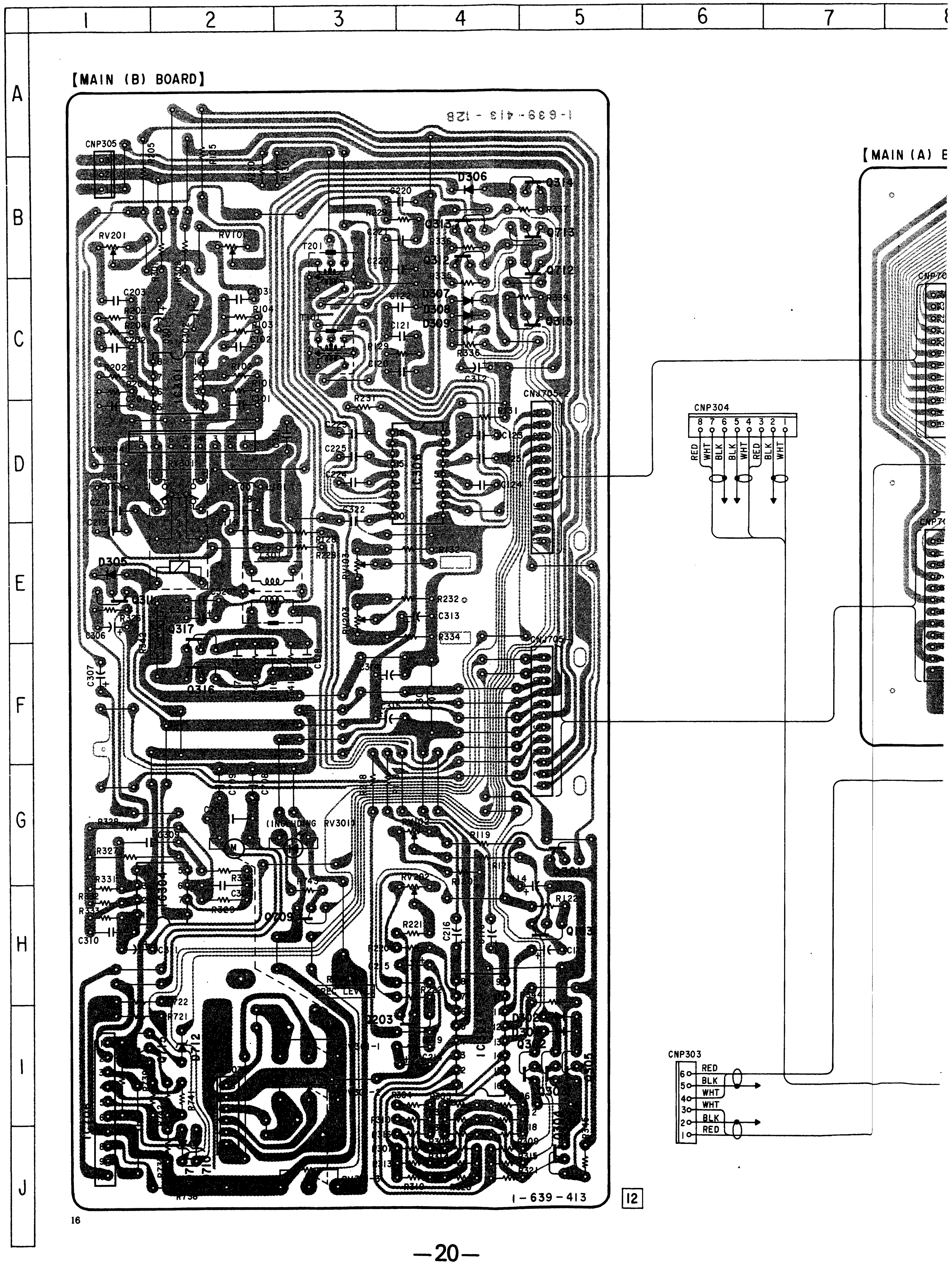
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C-12	Q306	D-11
D201	C-13	Q307	E-11
D301	I-5	Q308	F-11
D302	I-5	Q309	E-11
D303	E-11	Q310	E-11
D304	E-11	Q311	E-1
D305	E-1	Q312	B-4
D306	B-4	Q313	B-4
D307	C-4	Q314	B-5
D308	C-4	Q315	C-5
D309	C-4	Q316	F-2
D601	A-20	Q317	E-2
D701	C-17	Q318	F-11
D702	C-17	Q701	F-13
D703	E-12	Q702	F-13
D704	E-12	Q703	E-13
D705	F-12	Q704	D-17
D706	F-12	Q705	C-17
D707	E-14	Q706	C-15
D708	E-14	Q707	C-17
D709	E-13	Q708	B-19
D710	J-2	Q709	H-3
D711	J-2	Q712	B-5
D712	I-2	Q713	B-5
D713	C-15	Q715	I-1
D714	C-17	Q801	B-13
D720	C-10	Q802	B-11
D721	C-11		
D722	C-12		
D750	B-13		
D751	D-14		
D752	B-19		
D753	A-19		
D801	D-16		
D802	C-15		
D803	C-15		
D804	C-14		
D805	C-14		
IC301	C-2		
IC302	E-9		
IC303	I-4		
IC304	H-2		
IC305	D-13		
IC306	D-4		
IC701	E-16		
IC702	B-15		
IC703	E-13		
IC704	D-13		
IC705	D-15		
IC706	I-1		
IC1001	H-18		
IC1002	H-19		
Q101	D-10		
Q102	D-11		
Q103	H-5		
Q201	F-10		
Q202	D-11		
Q203	I-4		
Q301	G-5		
Q302	I-5		
Q303	I-5		
Q304	J-5		
Q305	I-5		

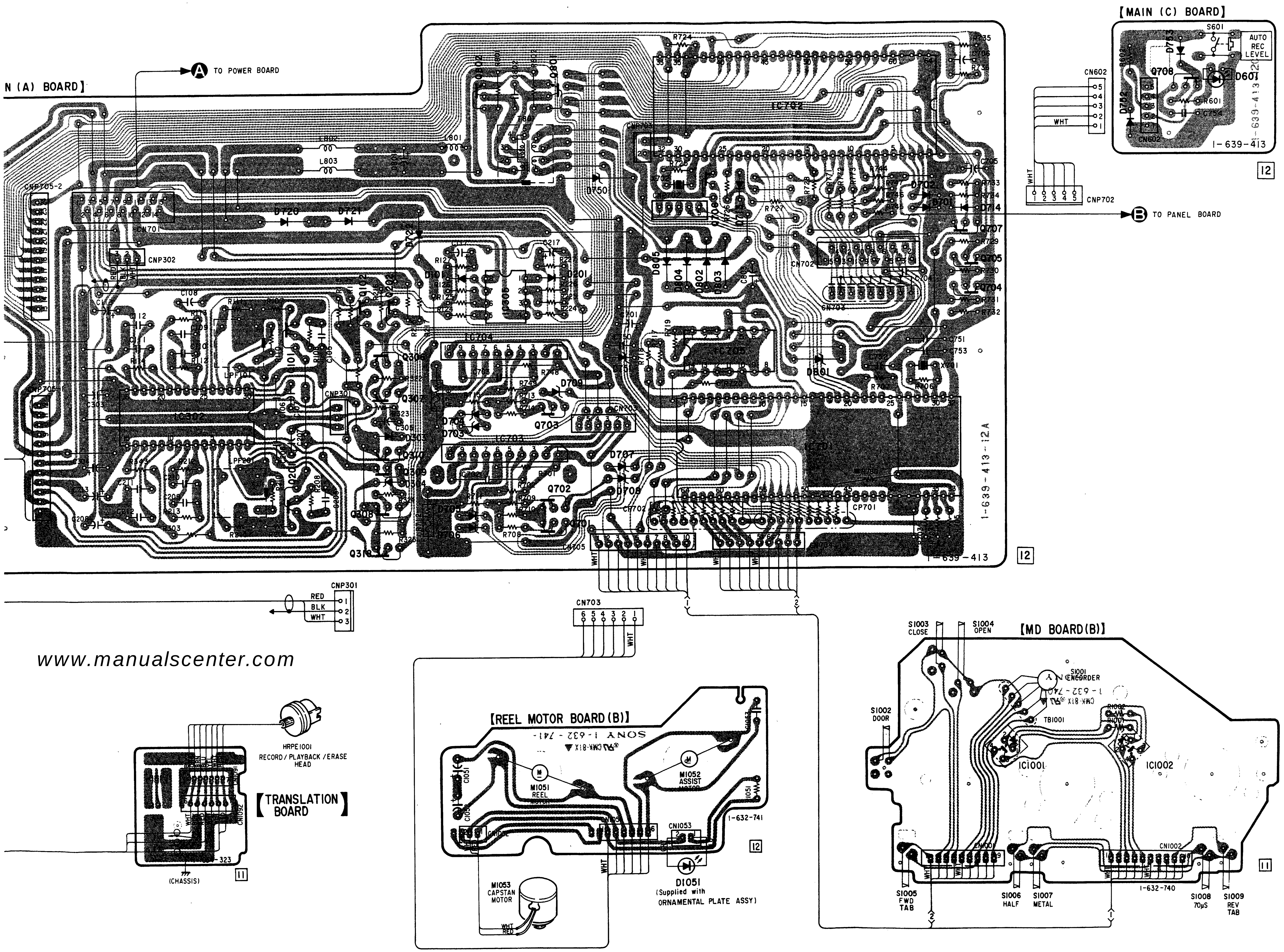
Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.

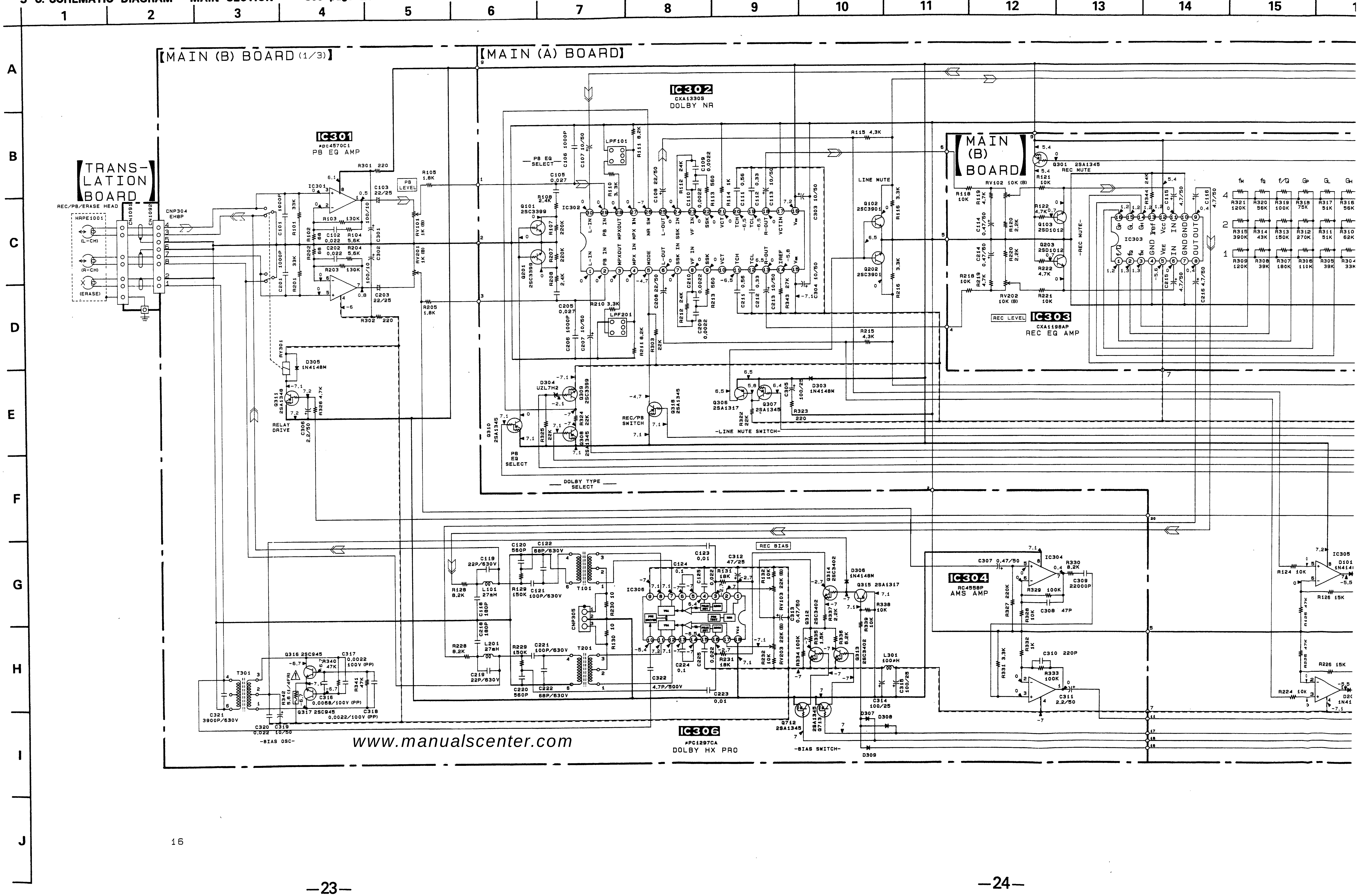
5-5. PRINTED WIRING BOARDS – MAIN SECTION – • See page 14 for Semiconductor Lead Layouts and Circuit Boar


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
[MAIN (B) BOARD]
[MAIN (A) E
1-639-413-12B
CNP305
RV201
RV101
T201
D306
D305
Q317
Q316
Q709
CNP304
8 7 6 5 4 3 2 1
RED WHT BLK BLK WHT RED BLK WHT
CNP303
6 RED
5 BLK
4 WHT
3 WHT
2 BLK
1 RED
1-639-413
12
16

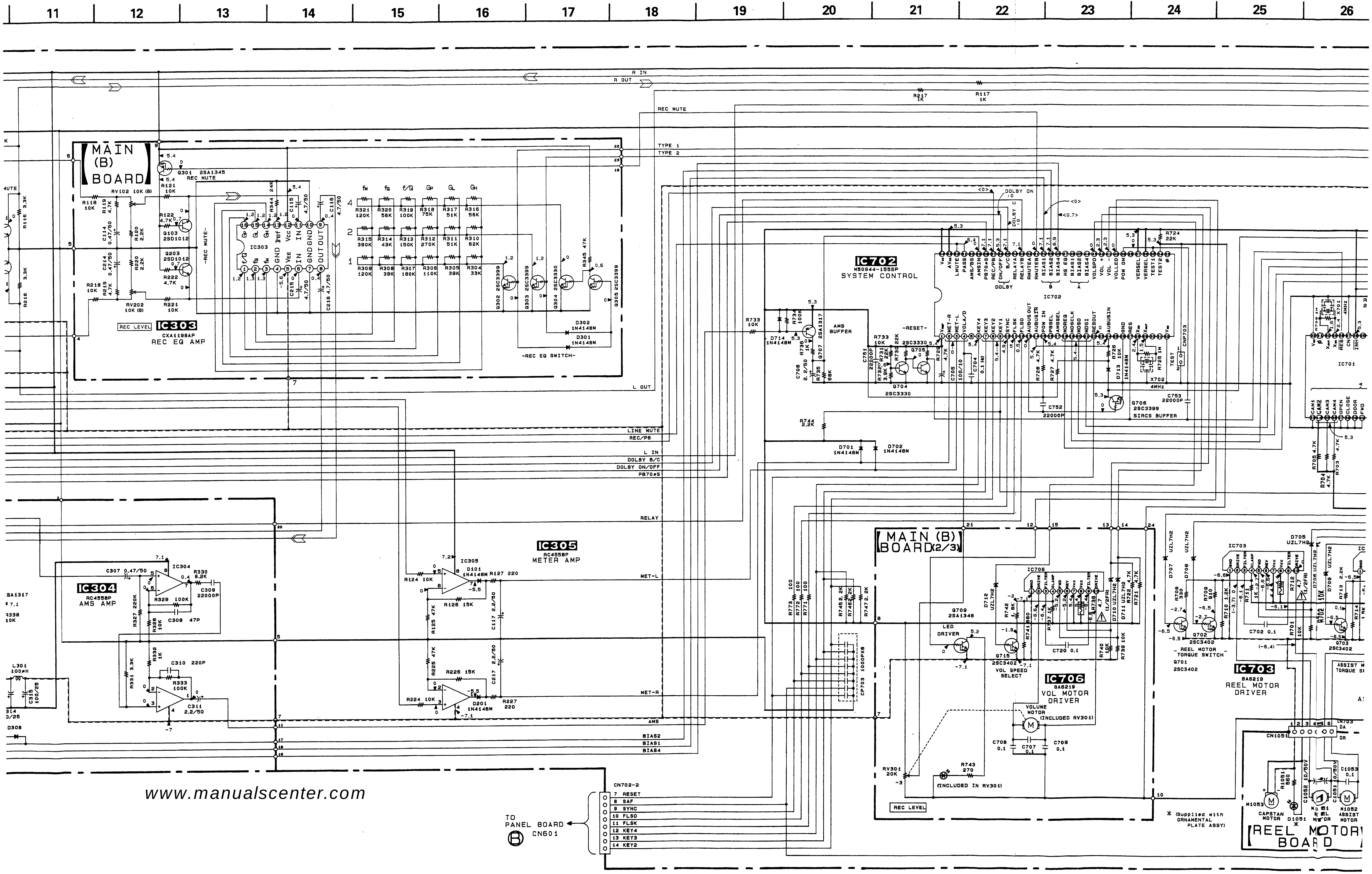
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22


N (A) BOARD]
TO POWER BOARD
TO PANEL BOARD
[MAIN (C) BOARD]
S601
AUTO REC LEVEL
CN602
Q708
D601
D753
D702
R601
C754
1-639-413
12
WHT
CNP702
CNP705-2
CNP705-1
CNP302
CNP301
RED
BLK
WHT
IC702
IC704
IC703
IC705
IC701
IC302
IC101
IC201
LPF101
LPF201
L801
L802
L803
D720
D721
D750
D801
D802
D803
D804
D805
Q701
Q702
Q703
Q704
Q705
Q707
Q301
Q302
Q303
Q310
CN701
CN702
CN703
CN705
CP701
X701
1-639-413-12A
1-639-413
12
CN703
6 5 4 3 2 1
WHT
HRPE1001
RECORD / PLAYBACK / ERASE HEAD
[TRANSLATION BOARD]
(CHASSIS)
-323
11
[REEL MOTOR BOARD (B)]
SONY 1-632-741-
CMK-81X
M1051 REEL MOTOR
M1052 ASSIST MOTOR
M1053 CAPSTAN MOTOR
CN1051
CN1053
C1051
C1052
1-632-741
12
WHT
RED
D1051
(Supplied with ORNAMENTAL PLATE ASSY)
[MD BOARD (B)]
S1003 CLOSE
S1004 OPEN
S1001 ENCORDER
S1002 DOOR
TB1001
IC1001
IC1002
R1001
R1002
1-632-740
CMK-81X
CN1001
CN1002
S1005 FWD TAB
S1006 HALF
S1007 METAL
S1008 70μS
S1009 REV TAB
1-632-740
11

5-6. SCHEMATIC DIAGRAM – MAIN SECTION – • See page 28 for Note on Schematic Diagram.



[MAIN (B) BOARD (1/3)]
[MAIN (A) BOARD]
[TRANSLATION BOARD]
REC/PB/ERASE HEAD
HRPE1001
(L-CH)
(R-CH)
(ERASE)
CN1091
CN1092
CNP304 EH8P
IC301 μPC4570C1 PB EQ AMP
IC302 CXA1330S DOLBY NR
LPF101
LPF201
PB EQ SELECT
PB LEVEL
RV101 1K (B)
RV201 1K (B)
LINE MUTE
[MAIN (B) BOARD]
Q301 2SA1345 REC MUTE
RV102 10K (B)
RV202 10K (B)
-REC MUTE-
IC303 CXA1198AP REC EQ AMP
REC LEVEL
RY301
D305 1N4148M
Q311 2SA1348
RELAY DRIVE
D304 UZL7H2
Q309 2SC3399
Q308 2SA1345
Q310 2SA1345
PB EQ SELECT
REC/PB SWITCH
Q318 2SA1345
Q306 2SA1317
Q307 2SA1345
D303 1N4148M
-LINE MUTE SWITCH-
DOLBY TYPE SELECT
IC304 RC4558P AMS AMP
REC BIAS
IC306 μPC1297CA DOLBY HX PRO
T101
T201
CNP305
T301
Q316 2SC945
Q317 2SC945
-BIAS OSC-
Q312 2SC3402
Q313 2SC3402
Q314 2SC3402
Q315 2SA1317
D306 1N4148M
L301 100μH
Q712 2SA1345
-BIAS SWITCH-
D307
D308
D309
IC305
fH fQ f/Q GP GL GH
16

11
12
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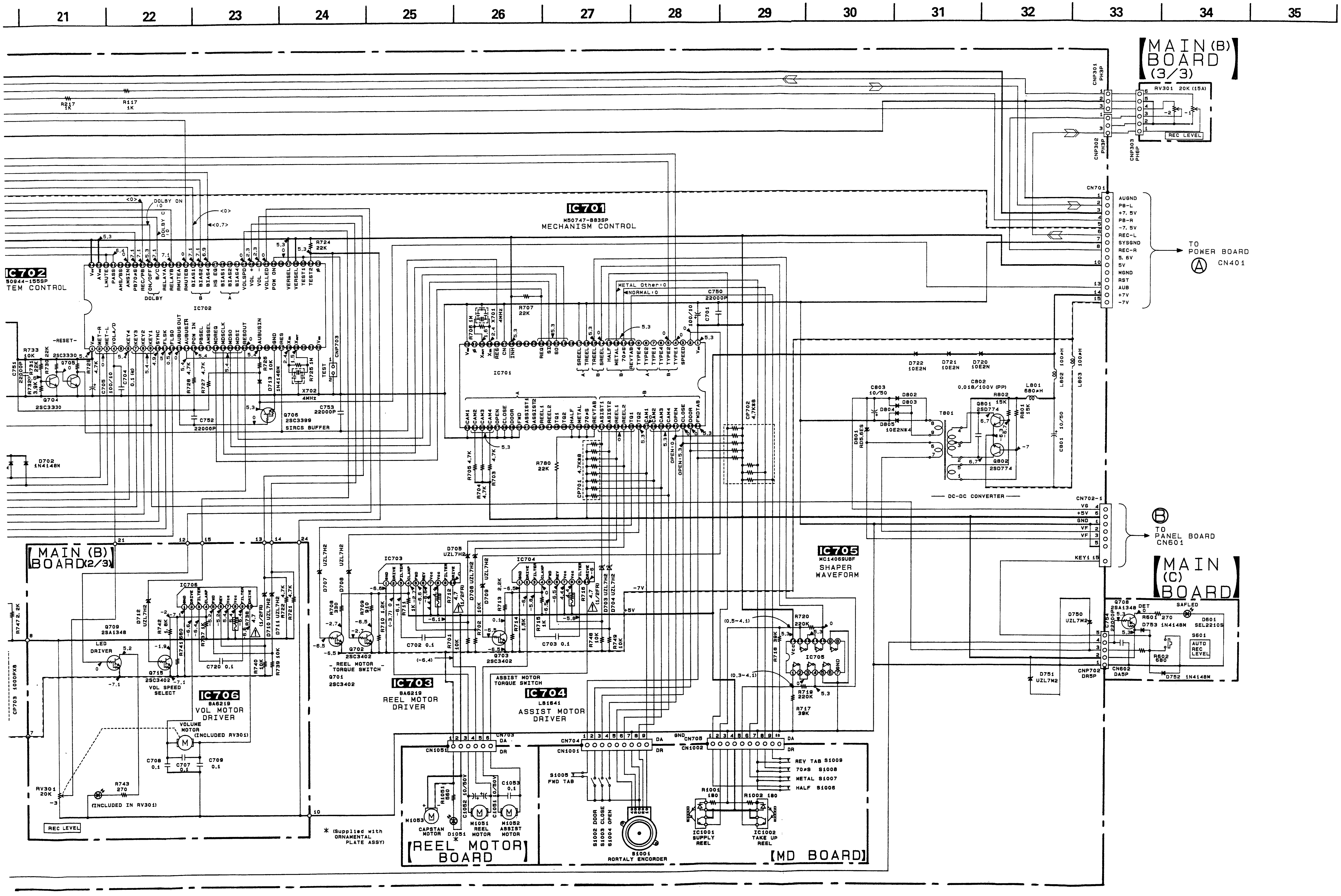
20
21
22
23
24
25
26
R IN
R OUT
R217 1K
R117 1K
REC MUTE
TYPE 1
TYPE 2
MAIN (B) BOARD
Q301 2SA1345 REC MUTE
RV102 10K (B)
R121 10K
R118 10K
R119 4.7K
C114 0.47/50
R120 2.2K
R122 4.7K
Q103 2SD1012
Q203 2SD1012
C214 0.47/50
R220 2.2K
R222 4.7K
R218 10K
R219 4.7K
RV202 10K (B)
R221 10K
R116 3.3K
R216 3.3K
-REC MUTE-
R344 24K
C115 4.7/50
C116 4.7/50
IC303
C215 4.7/50
C216 4.7/50
REC LEVEL
IC303
CXA1198AP
REC EQ AMP
R321 120K
R320 56K
R319 100K
R318 75K
R317 51K
R316 56K
R315 390K
R314 43K
R313 150K
R312 270K
R311 51K
R310 62K
R309 120K
R308 39K
R307 180K
R306 110K
R305 39K
R304 33K
Q302 2SC3399
Q303 2SC3399
Q304 2SC3330
R345 47K
Q305 2SC3399
D302 1N4148M
D301 1N4148M
-REC EQ SWITCH-
L OUT
IC702
M50944-155SP
SYSTEM CONTROL
DOLBY ON
DOLBY
R724 22K
R733 10K
D714 1N4148M
R734 100K
R736 1K
Q707 2SA1317
AMS BUFFER
R735 68K
R733 10K
-RESET-
C706 2.2/50
C751 22000P
Q704 2SC3330
Q705 2SC3330
C705 100/10
C704 0.1
R728 4.7K
R727 4.7K
C752 22000P
D713 1N4148M
R726 10K
R725 1M
X702 4MHz
C753 22000P
Q706 2SC3399
SIRCS BUFFER
CNP703
IC701
X701 4MHz
R744 2.2K
D701 1N4148M
D702 1N4148M
LINE MUTE
REC/PB
L IN
DOLBY B/C
DOLBY ON/OFF
PB70μS
R705 4.7K
R704 4.7K
R703 4.7K
RELAY
IC305
RC4558P
METER AMP
IC304
RC4558P
AMS AMP
C307 0.47/50
R330 8.2K
C309 22000P
R329 100K
R327 220K
R328 10K
C308 47P
R332 1K
C310 220P
R331 3.3K
R333 100K
C311 2.2/50
L301 100μH
C315 100/25
D308
D101 1N4148M
R127 220
R124 10K
R126 15K
R125 47K
C117 2.2/50
R225 47K
R226 15K
C217 2.2/50
R224 10K
D201 1N4148M
R227 220
MET-L
MET-R
AMS
BIAS2
BIAS1
BIAS4
MAIN (B) BOARD (2/3)
R773 100
R772 100
R771 100
R745 2.2K
R746 2.2K
R747 2.2K
CP703 1000PX8
Q709 2SA1348
LED DRIVER
R742 1.8K
R741 680
Q715 2SC3402
VOL SPEED SELECT
IC706
BA6219
VOL MOTOR DRIVER
C720 0.1
R740 10K
R739 10K
D712 UZL7H2
D710 UZL7H2
D711 UZL7H2
VOLUME MOTOR (INCLUDED RV301)
C708 0.1
C707 0.1
C709 0.1
RV301 20K
R743 270
(INCLUDED IN RV301)
REC LEVEL
D707 UZL7H2
D708 UZL7H2
D705 UZL7H2
IC703
R708 330
R709 910
R710 1.2K
Q702 2SC3402
REEL MOTOR TORQUE SWITCH
Q701 2SC3402
C702 0.1
R701 10K
R702 10K
R713 2.2K
D709 UZL7H2
Q703 2SC3402
IC703
BA6219
REEL MOTOR DRIVER
ASSIST MOTOR TORQUE
CN703
CN1051
R1051 560
C1052 10/50V
C1051 10/50V
C1053 0.1
M1053 CAPSTAN MOTOR
D1051
M1051 REEL MOTOR
M1052 ASSIST MOTOR
* (Supplied with ORNAMENTAL PLATE ASSY)
REEL MOTOR BOARD
CN702-2
7 RESET
8 SAF
9 SYNC
10 FLSO
11 FLSK
12 KEY4
13 KEY3
14 KEY2
TO PANEL BOARD
B CN601


21
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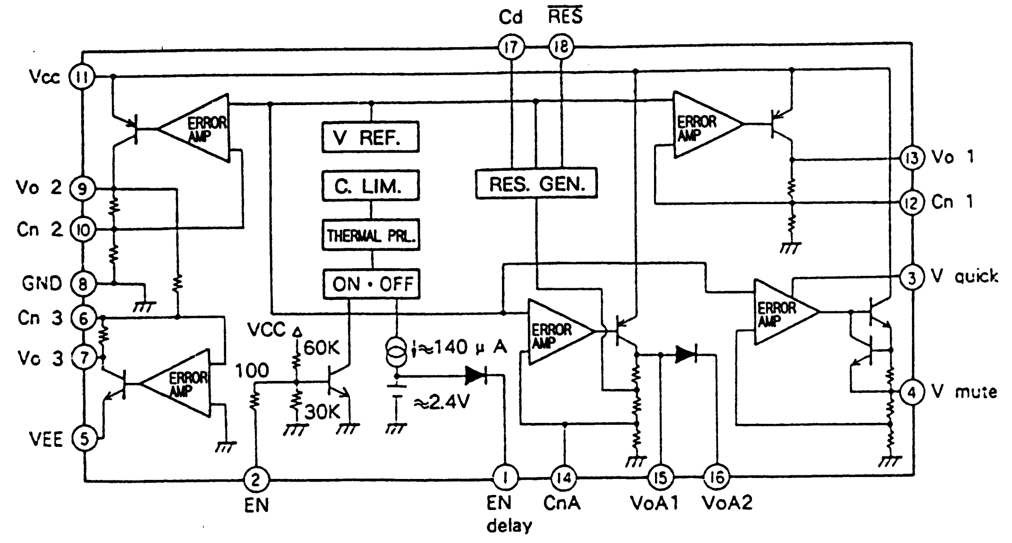
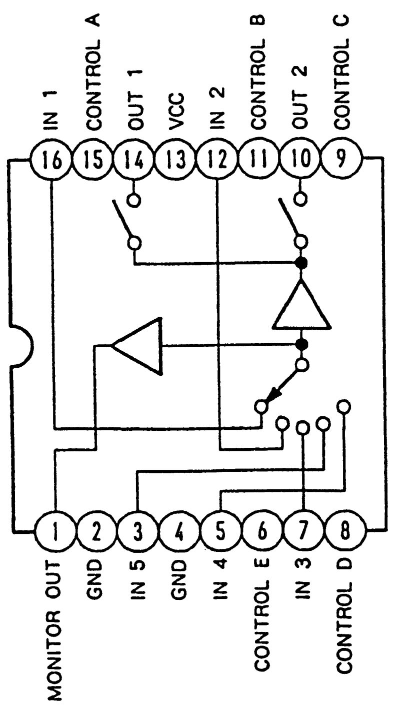
35
MAIN (B) BOARD (3/3)
CNP301 PH3P
CNP302 PH3P
CNP303 PH6P
RV301 20K (15A)
REC LEVEL
R217 1K
R117 1K
IC701
M50747-B83SP
MECHANISM CONTROL
IC702
50944-155SP
TEM CONTROL
CN701
AUGND
PB-L
+7.5V
PB-R
-7.5V
REC-L
SYSGND
REC-R
5.6V
5V
MGND
RST
AUB
+7V
-7V
TO POWER BOARD
Ⓐ CN401
DOLBY ON
DOLBY
R724 22K
R707 22K
C750 22000P
C701
X701 4MHz
X702 4MHz
Q704 2SC3330
Q705
Q706 2SC3399
SIRCS BUFFER
C752 22000P
C753 22000P
D702 1N4148M
R780 22K
CP701 4.7K×8
CP702 4.7K×8
D722 10E2N
D721 10E2N
D720 10E2N
L802 100μH
L803 100μH
L801 680μH
C802 0.018/100V (PP)
C803 10/50
C801 10/50
D801 RD5.6ES
D802
D803
D804
D805 10E2N×4
T801
Q801 2SD774
Q802 2SD774
R801 15K
R802 15K
DC-DC CONVERTER
CN702-1
VG
+5V
GND
VF
VF
KEY1
TO PANEL BOARD
Ⓑ CN601
IC705
MC14069UBF
SHAPER WAVEFORM
R720 220K
R719 220K
R718 39K
R717 39K
MAIN (C) BOARD
Q708 2SA1348
D753 1N4148M
R601 270
D601 SEL2210S
S601 AUTO REC LEVEL
R602 680
D752 1N4148M
D750 UZL7M2
D751 UZL7M2
CNP702 DA5P
CN602 DA5P
SAFLED
DET
MAIN (B) BOARD (2/3)
IC706
BA6219
VOL MOTOR DRIVER
Q709 2SA1348
LED DRIVER
Q715 2SC3402
VOL SPEED SELECT
R747 2.2K
CP703 1000P×6
VOLUME MOTOR (INCLUDED RV301)
C708 0.1
C707 0.1
C709 0.1
R743 270
RV301 20K
(INCLUDED IN RV301)
REC LEVEL
C720 0.1
IC703
BA6219
REEL MOTOR DRIVER
Q701 2SC3402
Q702 2SC3402
REEL MOTOR TORQUE SWITCH
C702 0.1
D705 UZL7M2
D707 UZL7M2
D708 UZL7M2
IC704
LB1641
ASSIST MOTOR DRIVER
Q703 2SC3402
ASSIST MOTOR TORQUE SWITCH
C703 0.1
CN703 DA
CN1051 DR
CN704 DA
CN1001 DR
CN705 DA
CN1002 DR
M1053 CAPSTAN MOTOR
D1051
M1051 REEL MOTOR
M1052 ASSIST MOTOR
R1051 680
C1052 10/50V
C1051 10/50V
C1053 0.1
REEL MOTOR BOARD
* (Supplied with ORNAMENTAL PLATE ASSY)
S1005 FWD TAB
S1002 DOOR
S1003 CLOSE
S1004 OPEN
S1001 RORTALY ENCORDER
REV TAB S1009
70μS S1008
METAL S1007
HALF S1006
R1001 180
R1002 180
IC1001 SUPPLY REEL
IC1002 TAKE UP REEL
MD BOARD

• IC BLOCK DIAGRAM

IC501 LA5603


Cd
RES
17
18
Vcc 11
Vo 2 9
Cn 2 10
GND 8
Cn 3 6
Vo 3 7
VEE 5
ERROR AMP
V REF.
C. LIM.
THERMAL PRL.
ON • OFF
RES. GEN.
VCC
60K
100
30K
≈140 μ A
≈2.4V
13 Vo 1
12 Cn 1
3 V quick
4 V mute
2 EN
1 EN delay
14 CnA
15 VoA1
16 VoA2

IC407 BA7625


IN 1
CONTROL A
OUT 1
VCC
IN 2
CONTROL B
OUT 2
CONTROL C
16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
MONITOR OUT
GND
IN 5
GND
IN 4
CONTROL E
IN 3
CONTROL D

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ⏛ : fusible resistor.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

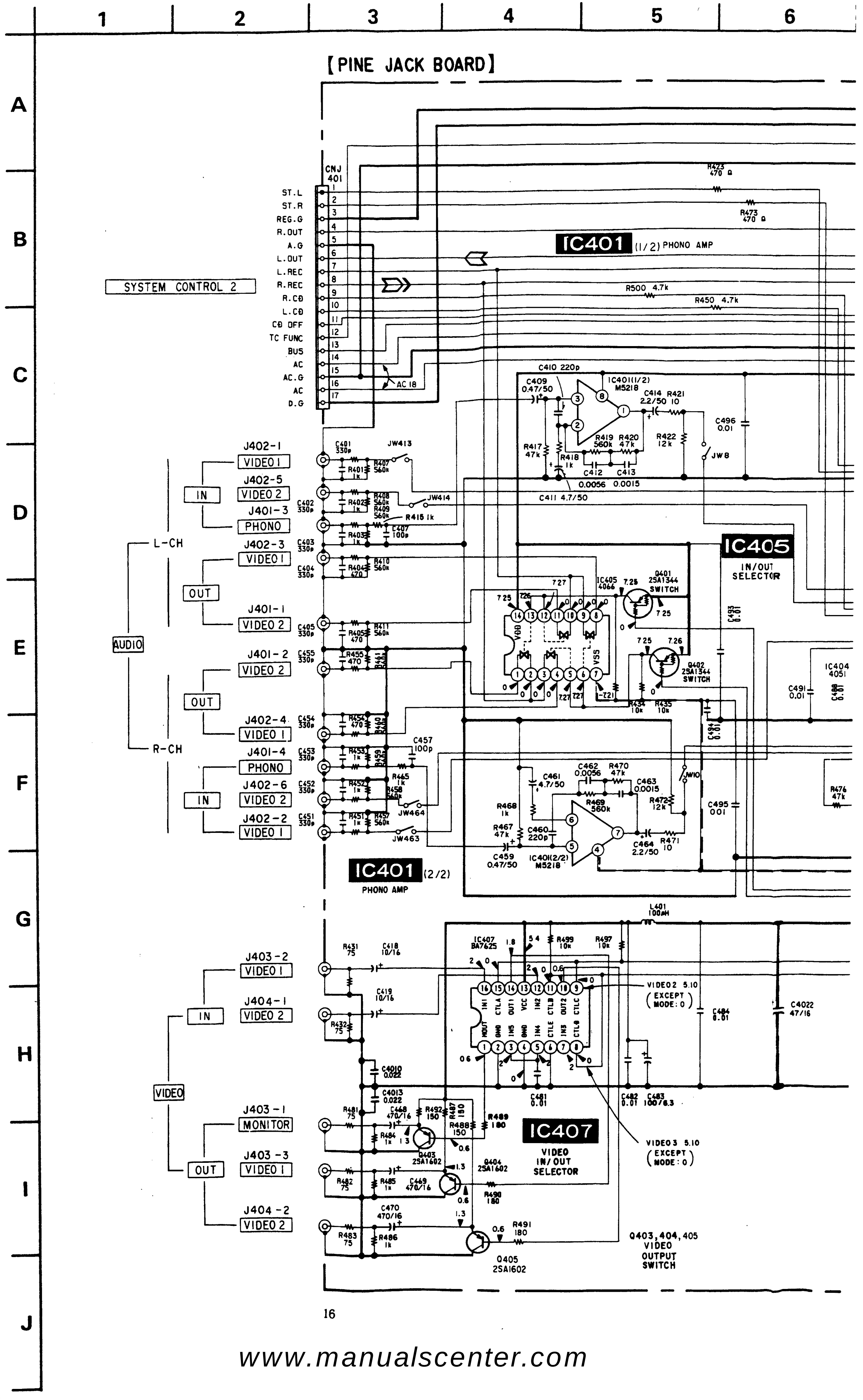
- ━━ : B+ Line
- ━ ━ : B– Line
- ▭ : adjustment for repair.

no mark : STOP
( ): PB
< >: REC

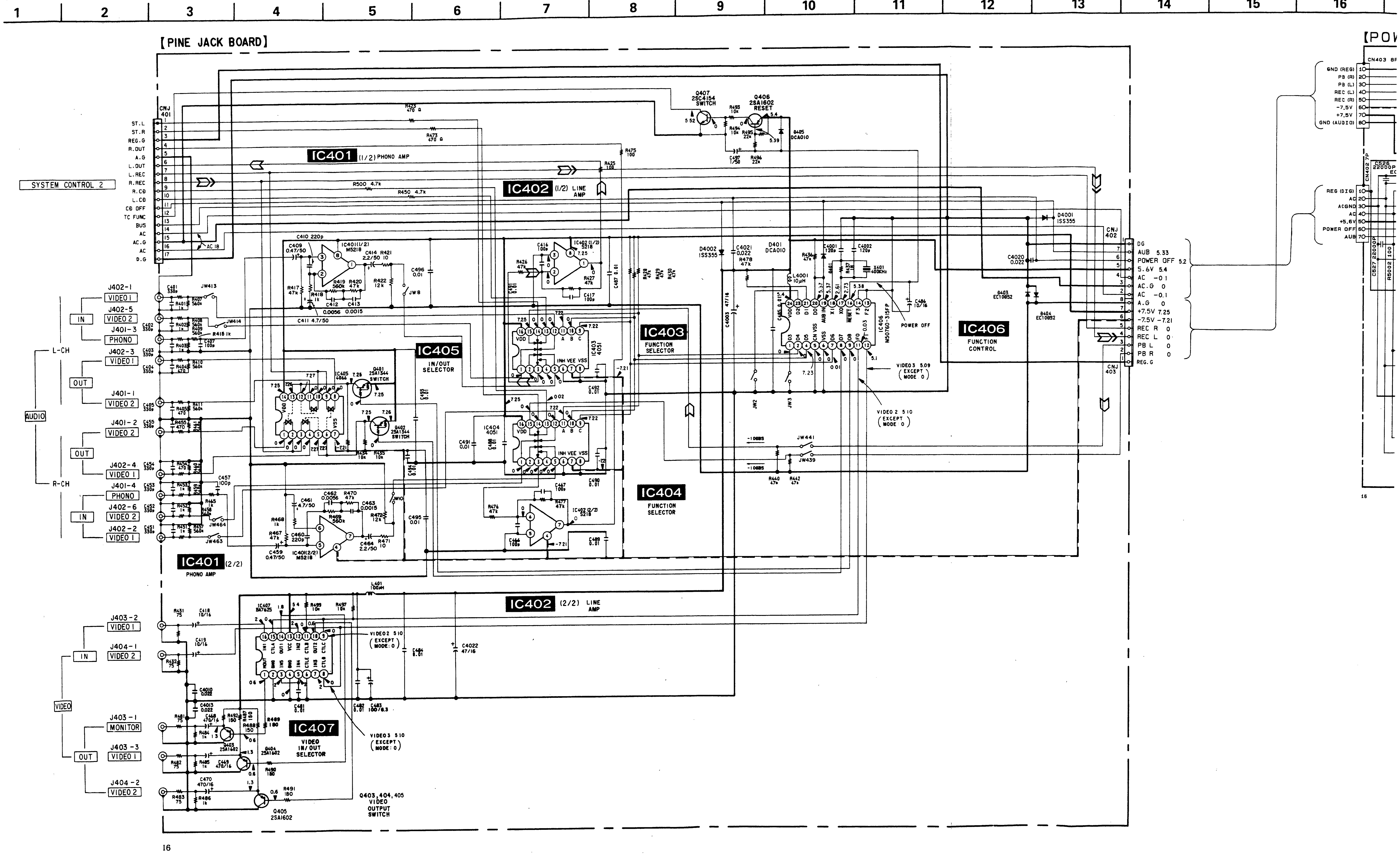
- Voltages are taken with a VOM (50 kΩ/V). Voltage variations may be noted due to normal production tolerances.
- Signal path.

ᐅ : PB
ᐅᐅ : REC

5-7. SCHEMATIC DIAGRAM – PIN JACK SECTION –


1
2
3
4
5
6
A
B
C
D
E
F
G
H
I
J
[PINE JACK BOARD]
CNJ 401
ST.L
ST.R
REG.G
R.OUT
A.G
L.OUT
L.REC
R.REC
R.CD
L.CD
CD OFF
TC FUNC
BUS
AC
AC.G
AC
D.G
SYSTEM CONTROL 2
IC401 (1/2) PHONO AMP
IC401 (2/2) PHONO AMP
IC405 IN/OUT SELECTOR
IC407 VIDEO IN/OUT SELECTOR
IC401(1/2) M5218
IC401(2/2) M5218
IC405 4066
IC407 BA7625
IC404 4051
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
Q403 2SA1602
Q404 2SA1602
Q405 2SA1602
Q403,404,405 VIDEO OUTPUT SWITCH
AUDIO
L-CH
R-CH
VIDEO
IN
OUT
J402-1 VIDEO 1
J402-5 VIDEO 2
J401-3 PHONO
J402-3 VIDEO 1
J401-1 VIDEO 2
J401-2 VIDEO 2
J402-4 VIDEO 1
J401-4 PHONO
J402-6 VIDEO 2
J402-2 VIDEO 1
J403-2 VIDEO 1
J404-1 VIDEO 2
J403-1 MONITOR
J403-3 VIDEO 1
J404-2 VIDEO 2
R500 4.7k
R450 4.7k
R473 470 Ω
R423 470 Ω
L401 100μH
C4022 47/16
VIDEO2 5.10 (EXCEPT MODE: 0)
VIDEO3 5.10 (EXCEPT MODE: 0)
JW413
JW414
JW463
JW464
JW8
16

SCHEMATIC DIAGRAM – PIN JACK SECTION –


1
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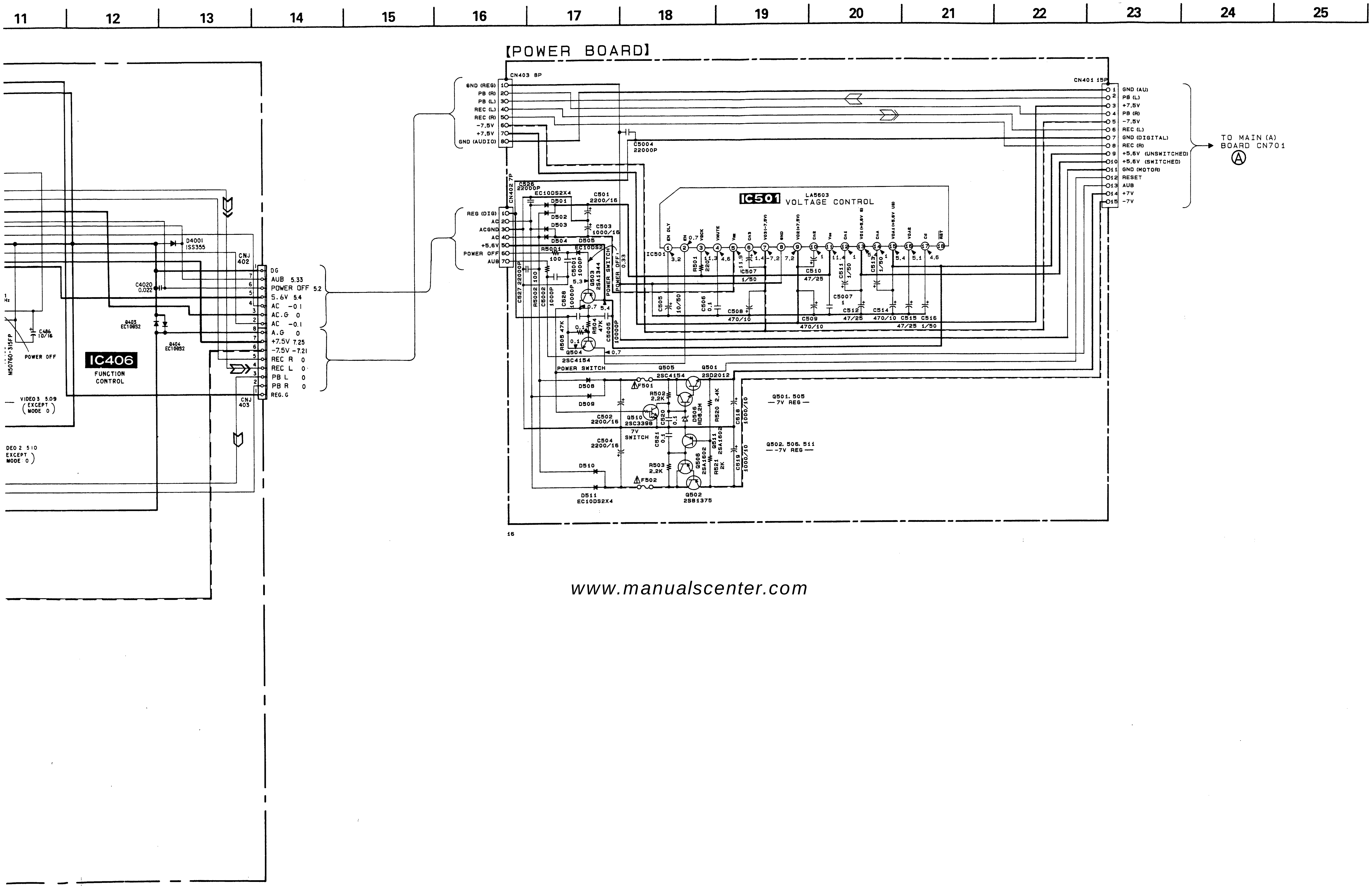
15
16
[PINE JACK BOARD]
[POV
CNJ 401
ST.L
ST.R
REG.G
R.OUT
A.G
L.OUT
L.REC
R.REC
R.CD
L.CD
CD OFF
TC FUNC
BUS
AC
AC.G
AC
D.G
AC 18
SYSTEM CONTROL 2
IC401 (1/2) PHONO AMP
IC402 (1/2) LINE AMP
IC401 (2/2) PHONO AMP
IC402 (2/2) LINE AMP
IC403 FUNCTION SELECTOR
IC404 FUNCTION SELECTOR
IC405 IN/OUT SELECTOR
IC406 FUNCTION CONTROL
IC407 VIDEO IN/OUT SELECTOR
IC401(1/2) M5218
IC401(2/2) M5218
IC402 (1/2) 5218
IC402 (2/2) 5218
IC403 4051
IC404 4051
IC405 4066
IC406 M50760-315FP
IC407 BA7625
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
Q403 2SA1602
Q404 2SA1602
Q405 2SA1602
Q403,404,405 VIDEO OUTPUT SWITCH
Q406 2SA1602 RESET
Q407 2SC4154 SWITCH
D401 DCA010
D403 EC10DS2
D404 EC10DS2
D405 DCA010
D4001 1SS355
D4002 1SS355
X401 400KHz
L401 100μH
L4001 10μH
POWER OFF
VIDEO2 5.10 (EXCEPT MODE: 0)
VIDEO3 5.10 (EXCEPT MODE: 0)
VIDEO3 5.09 (EXCEPT MODE 0)
VIDEO 2 5.10 (EXCEPT MODE 0)
JW2
JW3
JW8
JW413
JW414
JW439
JW441
JW463
JW464
JW10
-10dBs
L-CH
R-CH
AUDIO
VIDEO
IN
OUT
J402-1 VIDEO 1
J402-5 VIDEO 2
J401-3 PHONO
J402-3 VIDEO 1
J401-1 VIDEO 2
J401-2 VIDEO 2
J402-4 VIDEO 1
J401-4 PHONO
J402-6 VIDEO 2
J402-2 VIDEO 1
J403-2 VIDEO 1
J404-1 VIDEO 2
J403-1 MONITOR
J403-3 VIDEO 1
J404-2 VIDEO 2
CNJ 402
DG
AUB 5.33
POWER OFF 5.2
5.6V 5.4
AC -0.1
AC.G 0
AC -0.1
A.G 0
+7.5V 7.25
-7.5V -7.21
REC R 0
REC L 0
PB L 0
PB R 0
REG. G
CNJ 403
CN403 8P
GND (REG)
PB (R)
PB (L)
REC (L)
REC (R)
-7.5V
+7.5V
GND (AUDIO)
CN402 7P
REG (DIG)
AC
ACGND
AC
+5.6V
POWER OFF
AUB
C826 22000P
C827 22000P
R6002 100
16


11
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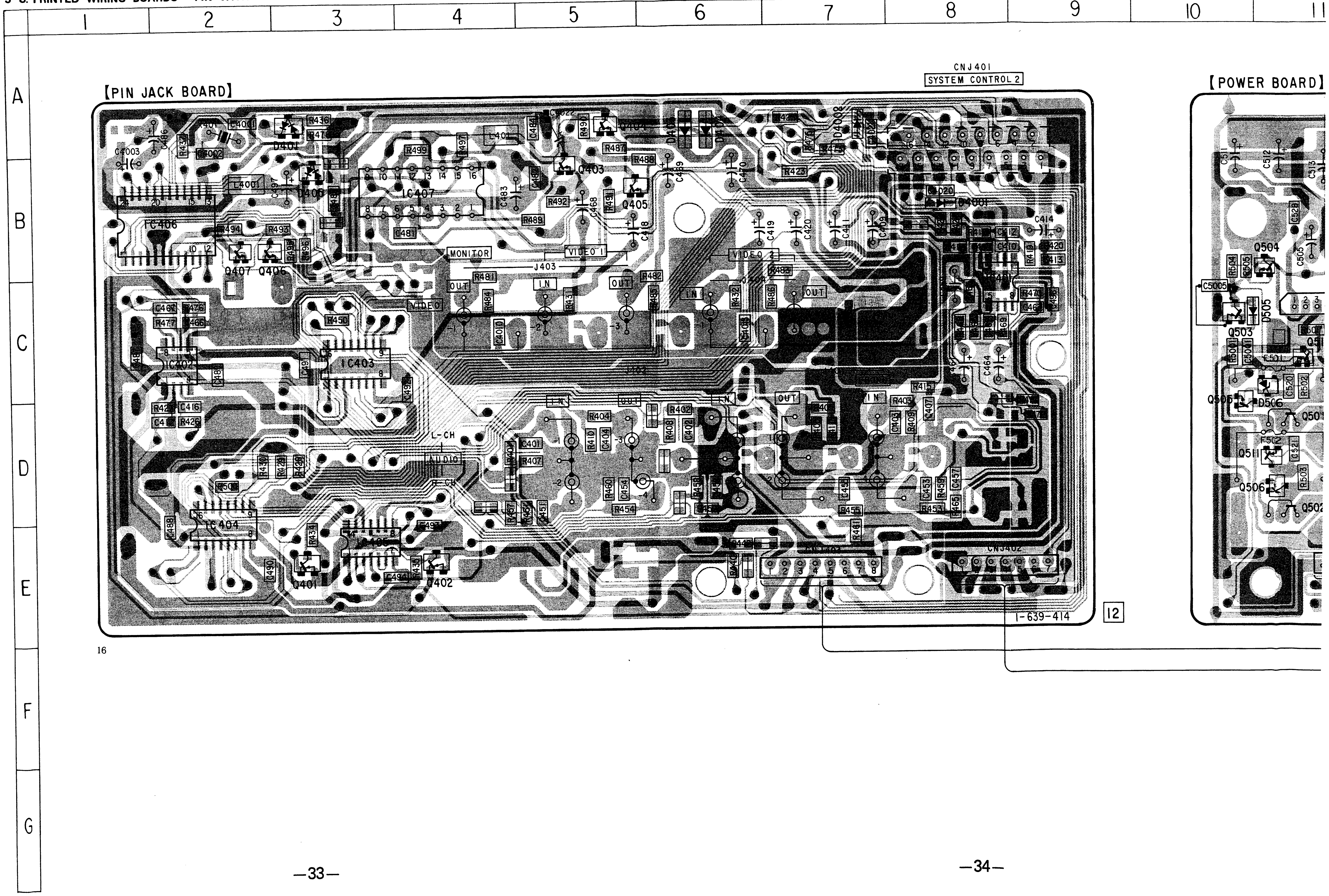
22
23
24
25
【POWER BOARD】
CN403 8P
GND (REG) 1
PB (R) 2
PB (L) 3
REC (L) 4
REC (R) 5
-7.5V 6
+7.5V 7
GND (AUDIO) 8
C5004
22000P
CN401 15P
1 GND (AU)
2 PB (L)
3 +7.5V
4 PB (R)
5 -7.5V
6 REC (L)
7 GND (DIGITAL)
8 REC (R)
9 +5.6V (UNSWITCHED)
10 +5.6V (SWITCHED)
11 GND (MOTOR)
12 RESET
13 AUB
14 +7V
15 -7V
TO MAIN (A) BOARD CN701
Ⓐ
CN402 7P
REG (DIG) 1
AC 2
ACGND 3
AC 4
+5.6V 5
POWER OFF 6
AUB 7
C526
22000P
EC10DS2X4
D501
D502
D503
D504
D505
C501
2200/16
C503
1000/16
R5001
100
EC10DS2
C5001
1000P
Q503
2SA1344
5.3
0.7
5.4
POWER SWITCH
POWER OFF: 0.33
C527 22000P
R5002 100
C5002 1000P
C528 10000P
R505 47K
R504 47K
0.1
Q504
2SC4154
C5005 10000P
0.7
IC501
LA5603
VOLTAGE CONTROL
EN DLY
EN
VGCK
VMUTE
Vcc
Cn3
VO3(-7.5V)
GND
VO2(+7.5V)
Cn2
Vcc
Cn1
VO1(+5.6V S)
CnA
VOA1(+5.6V US)
VOA2
Cd
RST
3.2
0.7
11.3
4.6
11.9
1.4
-7.2
7.2
1
11.4
1
5.4
1
5.4
5.1
4.6
R501
220
C505
10/50
C506
0.1
C507
1/50
C508
470/10
C509
470/10
C510
47/25
C511
1/50
C5007
1
C512
47/25
C513
1/50
C514
470/10
C515
47/25
C516
1/50
POWER SWITCH
Q505
2SC4154
Q501
2SD2012
D508
D509
F501
R502
2.2K
C502
2200/16
Q510
2SC3398
7V SWITCH
C520
0.1
D506
RD8.2M
R520 2.4K
C518
1000/10
Q501. 505
— 7V REG —
C504
2200/16
C521
0.1
Q511
2SA1602
D510
R503
2.2K
Q506
2SA1602
R521
2K
C519
1000/10
Q502. 506. 511
— -7V REG —
F502
D511
EC10DS2X4
Q502
2SB1375
16
D4001
1SS355
CNJ
402
DG
AUB 5.33
POWER OFF 5.2
5.6V 5.4
AC -0.1
AC.G 0
AC -0.1
A.G 0
+7.5V 7.25
-7.5V -7.21
REC R 0
REC L 0
PB L 0
PB R 0
REG.G
CNJ
403
C4020
0.022
8403
EC10BS2
8404
EC10BS2
C486
10/16
POWER OFF
M50760-315FP
IC406
FUNCTION CONTROL
VIDEO3 5.09
(EXCEPT MODE 0)
DEO 2 510
EXCEPT
MODE 0)

5-8. PRINTED WIRING BOARDS – PIN JACK SECTION –


1
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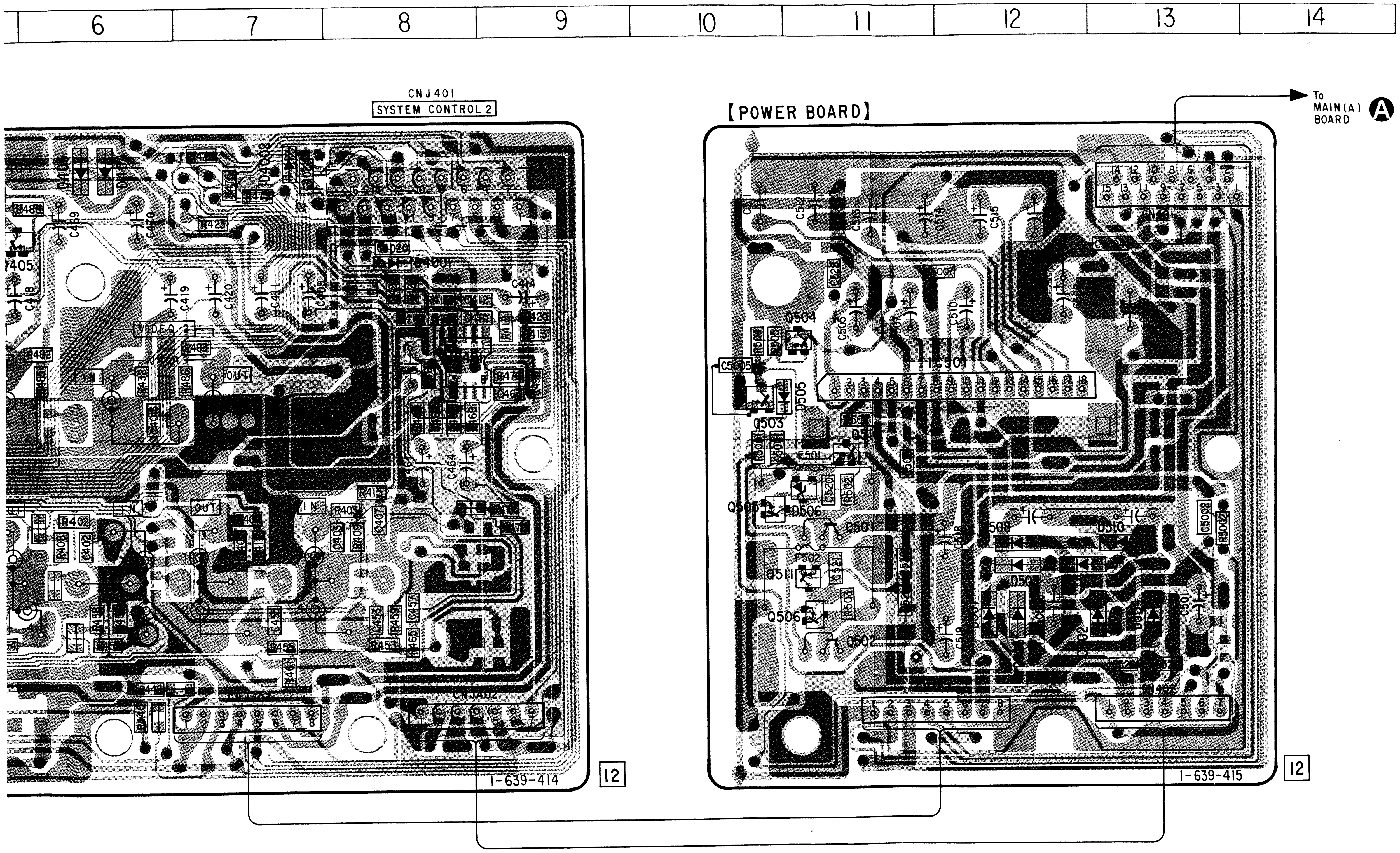
9
10
11
A
B
C
D
E
F
G
【PIN JACK BOARD】
【POWER BOARD】
CNJ401
SYSTEM CONTROL 2
CNJ402
IC402
IC403
IC404
IC405
IC406
IC407
J402
J403
MONITOR
VIDEO 1
VIDEO 2
VIDEO
AUDIO
L-CH
R-CH
IN
OUT
Q401
Q402
Q403
Q404
Q405
Q406
Q407
Q503
Q504
Q505
Q506
Q511
D401
D506
1-639-414
12
16


6
7
8
9
10
11
12
13
14
CNJ401
SYSTEM CONTROL 2
【POWER BOARD】
To
MAIN(A)
BOARD
A
VIDEO 2
IN
OUT
CNJ402
CN402
IC501
Q501
Q502
Q503
Q504
Q505
Q506
Q510
Q511
D505
D506
D501
D508
D510
1-639-414
12
1-639-415
12

• Semiconductor Location

Ref. No.	Location
D401	A-3
D403	A-6
D404	A-6
D405	B-3
D501	D-12
D502	D-13
D503	D-12
D504	D-13
D505	C-11
D506	C-11
D508	D-12
D509	D-12
D510	D-13
D511	D-12
D4001	B-8
D4002	A-7
IC401	C-8
IC402	C-2
IC403	C-3
IC404	E-2
IC405	E-3
IC406	B-2
IC407	B-4
IC501	C-12
Q401	E-3
Q402	E-4
Q403	B-5
Q404	A-5
Q405	B-5
Q406	B-2
Q407	B-2
Q501	D-11
Q502	D-11
Q503	C-10
Q504	B-11
Q505	D-10
Q506	D-11
Q510	C-11
Q511	D-11

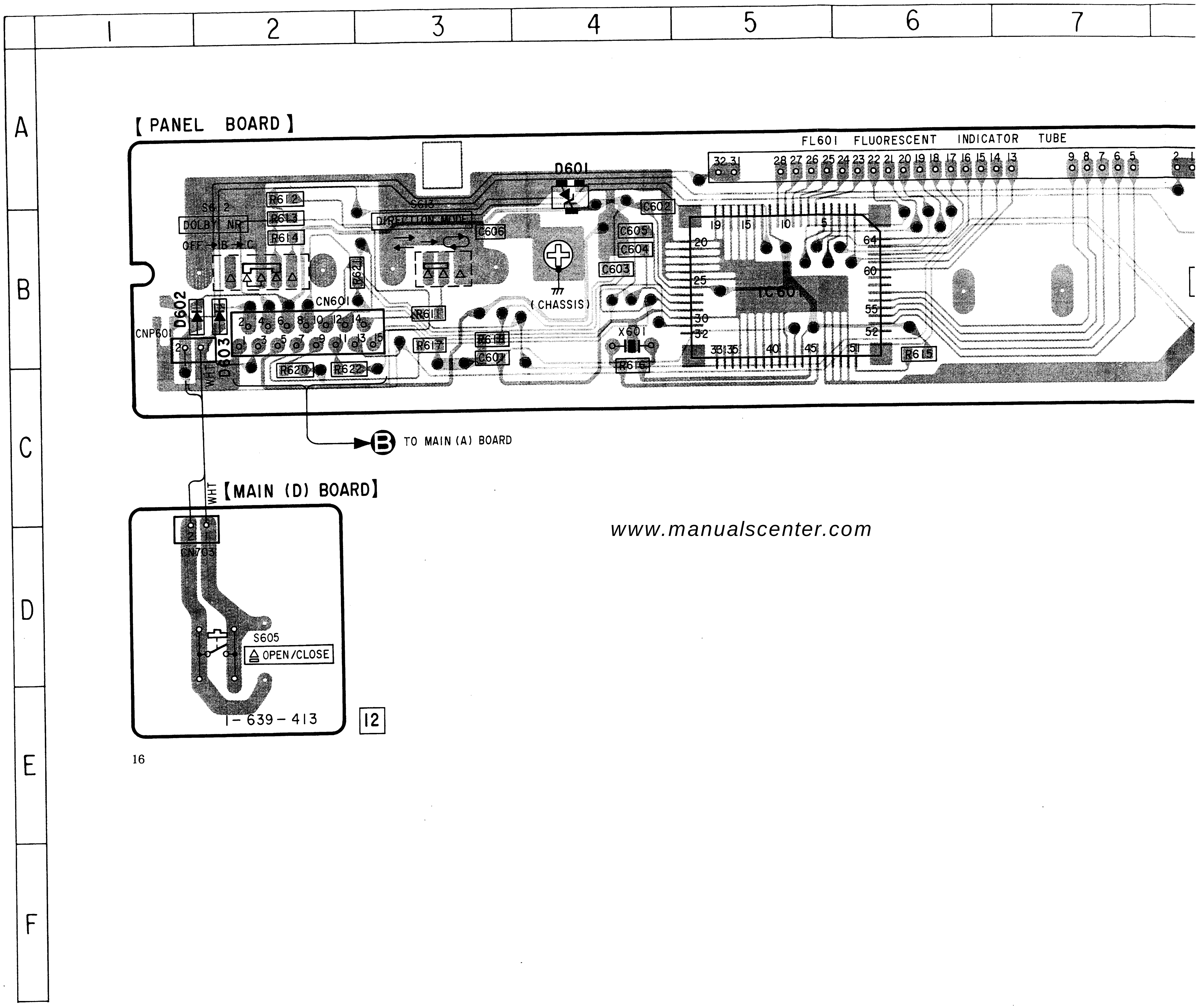
Note on Mounting Diagram:

- o—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

5-9. PRINTED WIRING BOARDS – PANEL SECTION –

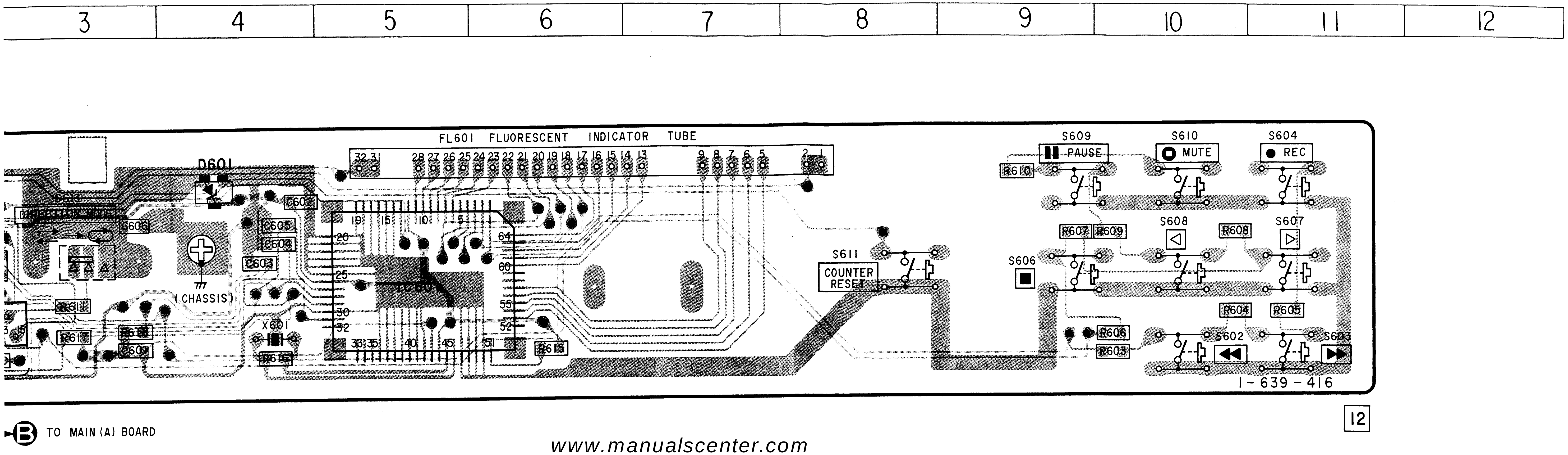
• Semiconductor Location

Ref. No.	Location
D601	A-4
D602	B-1
D603	B-2
IC601	B-5


1
2
3
4
5
6
7
A
B
C
D
E
F
【PANEL BOARD】
FL601 FLUORESCENT INDICATOR TUBE
D601
R612
R613
R614
DOLBY NR
OFF B C
S613
DIRECTION MODE
C606
C602
C605
C604
C603
(CHASSIS)
IC601
R621
CN601
R611
R617
R618
C601
X601
R616
R615
R620
R622
D602
D603
CNP601
WHT
B
TO MAIN (A) BOARD
【MAIN (D) BOARD】
CN703
S605
OPEN/CLOSE
1-639-413
12
16

Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.



3
4
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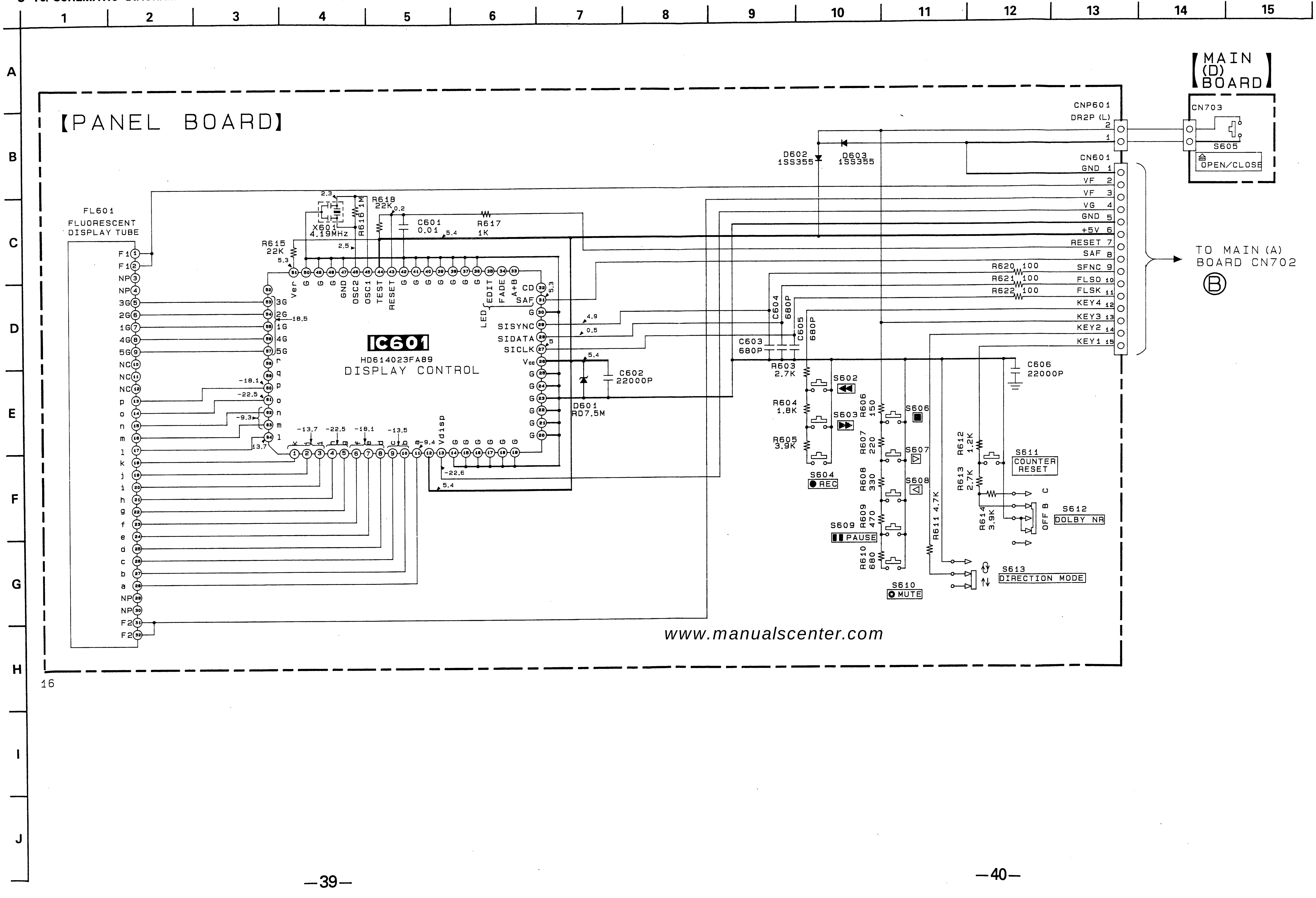
6
7
8
9
10
11
12
FL601 FLUORESCENT INDICATOR TUBE
32 31 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 9 8 7 6 5 2 1
D601
S612
DIRECTION MODE
C602
C606
C605
C604
C603
(CHASSIS)
R611
R617
R618
C607
X601
R616
IC601
19 15 10 5
20 25 30 32
64 60 55 52
33 35 40 45 51
R615
S611
COUNTER RESET
S609
PAUSE
R610
S610
MUTE
S604
REC
R607
R609
S608
R608
S607
S606
R604
R605
R606
R603
S602
S603
1-639-416
12
B TO MAIN (A) BOARD

D]

12

5-10. SCHEMATIC DIAGRAM – PANEL SECTION – • See page 28 for Note on Schematic Diagram.


1
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11
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13
14
15
A
B
C
D
E
F
G
H
I
J
【PANEL BOARD】
【MAIN (D) BOARD】
CN703
S605
≜ OPEN/CLOSE
CNP601
DR2P (L)
CN601
GND 1
VF 2
VF 3
VG 4
GND 5
+5V 6
RESET 7
SAF 8
SFNC 9
FLSO 10
FLSK 11
KEY4 12
KEY3 13
KEY2 14
KEY1 15
TO MAIN (A) BOARD CN702
Ⓑ
D602 1SS355
D603 1SS355
FL601
FLUORESCENT DISPLAY TUBE
F1
F2
NP
NC
3G
2G
1G
4G
5G
p
o
n
m
l
k
j
i
h
g
f
e
d
c
b
a
R615 22K
X601 4.19MHz
R616 1M
R618 22K
C601 0.01
R617 1K
Ver
GND
OSC2
OSC1
TEST
RESET
LED
EDIT
FADE
A+B
CD
SAF
SISYNC
SIDATA
SICLK
Vcc
Vdisp
IC601
HD614023FA89
DISPLAY CONTROL
C602 22000P
D601 RD7.5M
R620 100
R621 100
R622 100
C603 680P
C604 680P
C605 680P
C606 22000P
R603 2.7K
R604 1.8K
R605 3.9K
S602 ◀◀
S603 ▶▶
S604 ● REC
R606 150
R607 220
R608 330
R609 470
R610 680
S606 ■
S607 ▷
S608 ◁
S609 ▮▮ PAUSE
S610 ○ MUTE
R611 4.7K
R612 1.2K
R613 2.7K
R614 3.9K
S611 COUNTER RESET
S612 DOLBY NR
OFF B C
S613 DIRECTION MODE
2.3
0.2
2.5
5.3
5.4
4.9
0.5
-18.5
-18.1
-22.5
-9.3
-13.7
-22.6
-13.5
-9.4
16

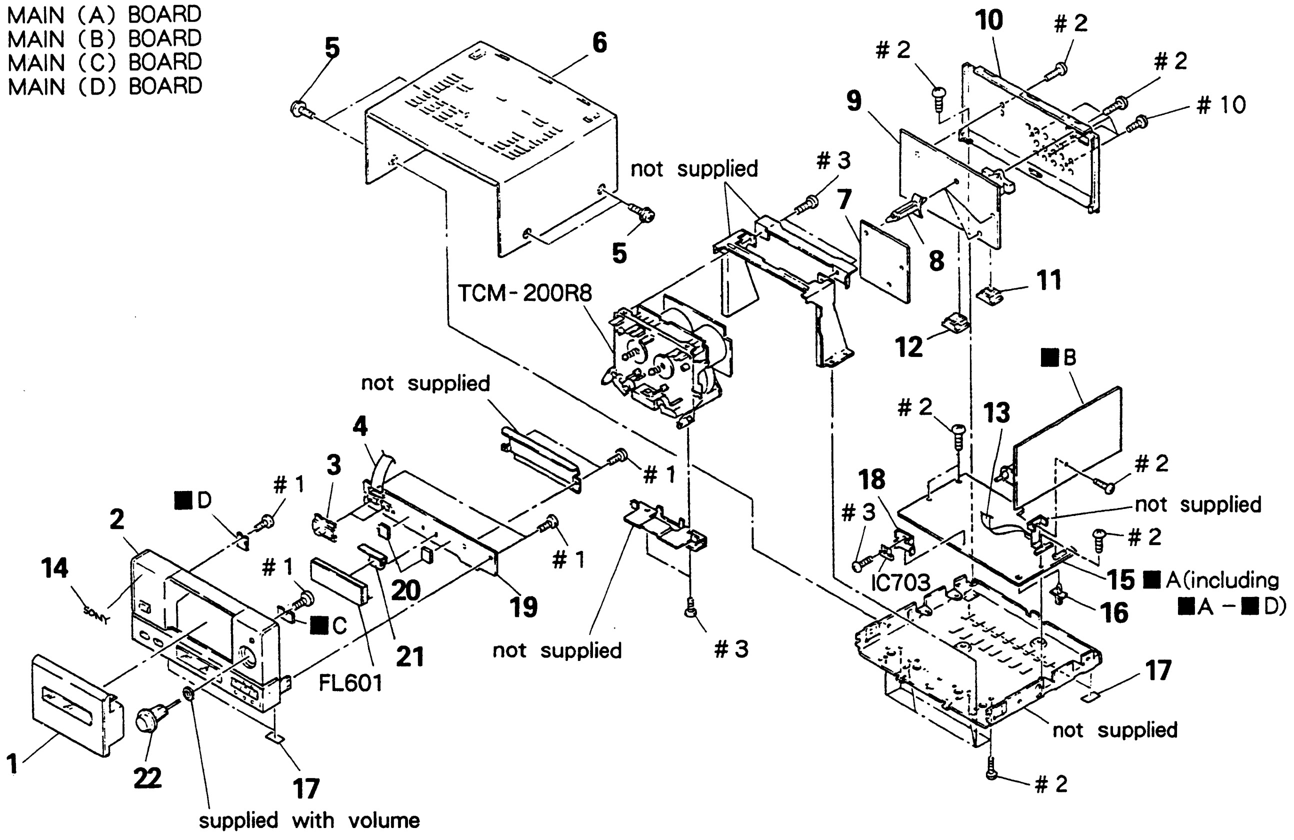
SECTION 6
EXPLODED VIEWS

NOTE :

- – XX, – X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

6-1. FRONT PANEL SECTION

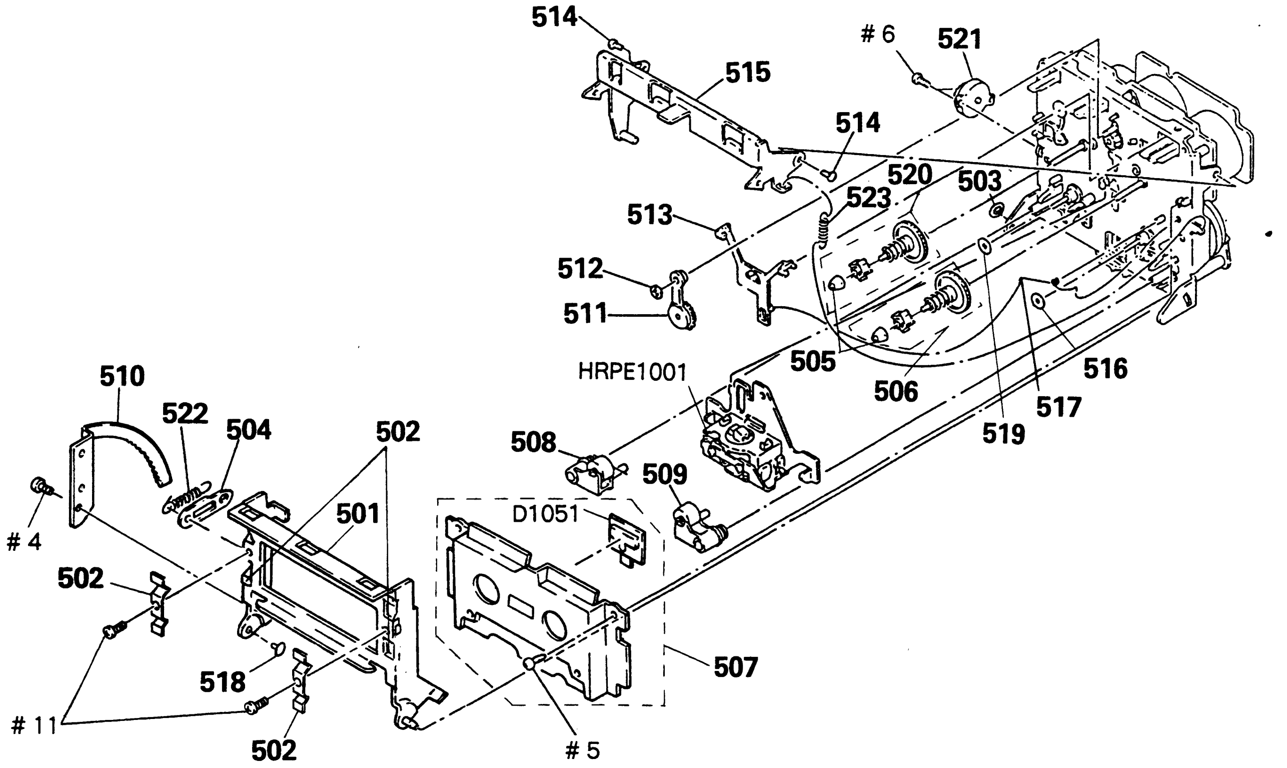
■A : MAIN (A) BOARD
■B : MAIN (B) BOARD
■C : MAIN (C) BOARD
■D : MAIN (D) BOARD


5
6
10
# 2
# 2
# 2
# 10
9
not supplied
# 3
7
8
5
TCM-200R8
11
12
■B
not supplied
4
# 2
13
# 2
3
# 1
# 1
not supplied
■D
2
18
# 3
# 2
14
# 1
# 1
20
19
IC703
15 ■A(including ■A – ■D)
16
■C
21
not supplied
# 3
FL601
17
not supplied
1
22
17
# 2
supplied with volume

Ref. No.	Part No.	Description	Remarks
1	A-2003-769-A	LID ASSY, CASSETTE	
2	A-2003-768-A	PANEL ASSY, FRONT	
3	3-368-105-01	KNOB (SLIDE)	
4	1-575-906-11	WIRE, FLAT TYPE (15 CORE)	
5	3-363-099-01	SCREW (CASE +3X8 TP2)	
6	4-932-841-01	CASE	
7	* 1-639-415-11	POWER BOARD	
8	* 3-703-353-02	SUPPORT, PC BOARD	
9	* A-2006-548-A	PIN JACK BOARD, COMPLETE	
10	* 3-367-074-01	PANEL, BACK	
11	* 1-573-188-11	CONNECTOR, BRIDGE 7P	
12	* 1-573-389-11	COONECTOR, BRIDGE 8P	

Ref. No.	Part No.	Description	Remarks
13	1-575-664-11	WIRE, FLAT TYPE (15 CORE)	
14	4-942-636-01	EMBLEM (NO. 3. 5), SONY	
15	* A-2006-452-A	MAIN BOARD, COMPLETE	
16	* 3-350-847-31	HOLDER, PCB	
17	4-930-336-01	FOOT (FELT)	
18	* 3-356-925-01	HEAT SINK	
19	* A-2006-453-A	PANEL BOARD, COMPLETE	
20	* 4-921-941-01	CUSHION (FL)	
21	* 3-368-109-01	HOLDER, FL TUBE	
22	A-2003-767-A	KNOB (REC VOL) ASSY	
FL601	1-519-656-11	INDICATOR TUBE, FLUORESCENT	
IC703	8-759-973-95	IC BA6219B	

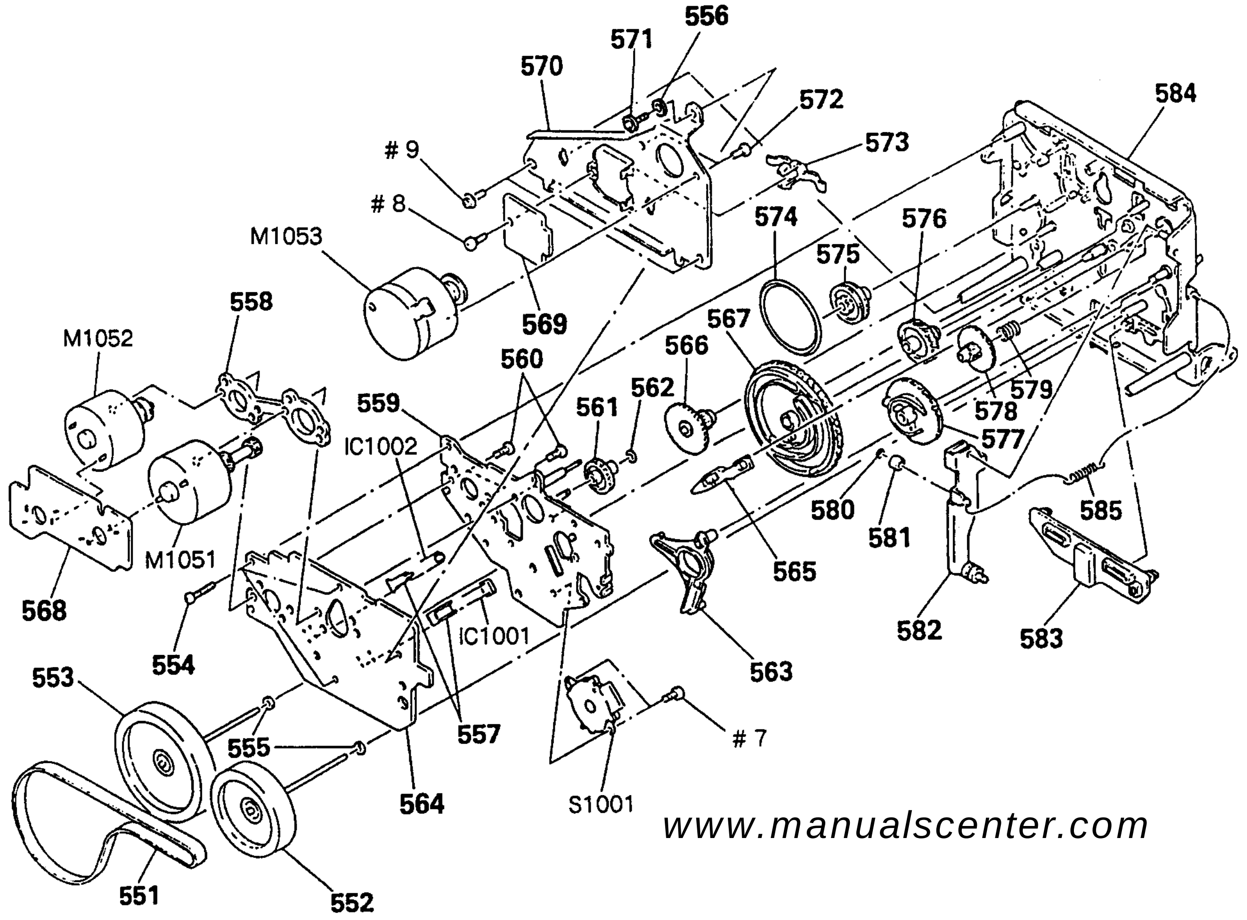
6-2. MECHANISM SECTION-1
(TCM-200R8)


514
# 6
521
515
514
520
503
523
513
512
511
505
HRPE1001
506
516
517
519
510
522
504
502
508
509
501
D1051
# 4
502
507
518
# 11
502
# 5

Ref. No.	Part No.	Description	Remarks
501	X-3362-956-1	HOLDER ASSY, CASSETTE	
502	3-354-908-01	SPRING (CASSETTE RETAINER)	
503	3-558-708-21	WASHER, STOPPER	
504	* 3-356-717-01	LEVER (JOINT)	
505	3-362-308-01	CAP (REEL)	
506	X-3356-627-1	GEAR (T) ASSY	
507	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
508	X-3343-455-1	LEVER (PINCH F) ASSY	
509	X-3343-456-1	LEVER (PINCH R) ASSY	
510	X-3362-957-1	GEAR ASSY, LOADING	
511	X-3356-641-1	LEVER (FR2) ASSY	
512	3-669-465-11	WASHER (1. 5), STOPPER	
513	3-356-614-01	SLIDER (BRAKE)	

Ref. No.	Part No.	Description	Remarks
514	3-356-601-11	SCREW, STEP	
515	* X-3356-608-1	LEVER (LIFTER) ASSY	
516	3-356-713-01	WASHER	
517	3-356-619-01	SPRING (B), TORSION	
518	3-356-710-01	SHAFT (LEFT) (CASSETTE HOLDER)	
519	3-356-714-01	WASHER	
520	X-3356-628-1	GEAR (S) ASSY	
521	3-712-786-01	DAMPER, OIL	
522	3-356-626-01	SPRING, TENSION	
523	3-356-625-01	SPRING, TENSION	
D1051	8-719-980-85	DIODE SLF-325C	
HRPE1001	A-2003-772-A	BASE ASSY, HEAD	

6-3. MECHANISM SECTION-2
(TCM-200R8)


556
571
570
572
584
#9
573
#8
574
576
M1053
575
558
569
567
M1052
560
566
562
559
561
579
IC1002
578
577
580
585
581
565
M1051
568
554
IC1001
582
583
563
553
555
557
#7
564
S1001
551
552

Ref. No.	Part No.	Description	Remarks
551	3-356-730-01	BELT (CAPSTAN R2)	
552	X-3356-642-1	FLYWHEEL (R FWD) ASSY	
553	X-3356-643-1	FLYWHEEL (R REV) ASSY	
554	3-355-801-01	SCREW (BTP 2X18)	
555	3-356-705-01	WASHER (CAPSTAN)	
556	* 3-356-718-01	SPACER (THRUST RETAINER R)	
557	3-356-631-01	HOLDER (SENSOR)	
558	* 3-356-628-01	SPACER (MOTOR)	
559	* X-3356-602-4	BRACKET (MOTOR R) ASSY	
560	3-363-804-01	SCREW (+P 2.6X6.5)	
561	3-356-702-01	GEAR (COMMUNICATION B)	
562	3-669-465-00	WASHER (1.5), STOPPER	
563	3-356-613-01	LEVER (MODE)	
564	* 1-632-740-11	MD BOARD	
565	3-356-617-01	LEVER (SELECTION)	
566	3-356-606-01	GEAR (MODE)	
567	3-356-615-01	GEAR (MODE CAM RR)	
568	* 1-632-741-11	REEL MOTOR BOARD	
569	* 1-634-323-11	TRANSLATION BOARD	
570	* 3-356-629-01	BRACKET (THRUST RETAINER R)	
571	3-356-707-01	SCREW (+PTPWH 2X25)	
572	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
573	3-575-321-00	RETAINER, THRUST, CAPSTAN	
574	3-356-603-01	BELT (MODE)	
575	3-356-607-01	PULLEY (MODE)	
576	3-356-703-01	GEAR (COMMUNICATION C)	
577	3-356-616-01	GEAR (LOADING CAM)	
578	3-356-609-01	GEAR (LOADING)	
579	3-356-605-01	SPRING, COMPRESSION	
580	3-558-708-11	WASHER, STOPPER	
581	3-356-630-01	ROLLER (LOADING)	
582	* X-3356-606-1	LEVER (LOADING) ASSY	
583	3-356-612-01	SLIDER (REVERSE)	
584	X-3356-634-1	CHASSIS (R2)COMPLETE ASSY, MECH	
585	3-356-624-01	SPRING, TENSION	
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY	
S1001	1-466-525-11	ENCODER, ROTARY	

MAIN

SECTION 7
ELECTRICAL PARTS LIST

NOTE :

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be defferent from the parts specified in the diagrams or the components used on the set.
- −XX, −X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... ,
  uPB... , μPB... , uPC... , μPC... ,
  uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	* A-2006-452-A	MAIN BOARD, COMPLETE				
		********************				
	* 1-573-496-11	HOUSING, CONNECTOR 12P				
	* 1-573-497-11	PIN, CONNECTOR (PC BOARD) 12P				
	* 3-356-925-01	HEAT SINK				
	7-682-547-04	SCREW +BVTT 3X6 (S)				
		(CAPACITOR)				
C101	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C102	1-136-157-00	FILM	0.022uF	5%	50V	
C103	1-124-282-00	ELECT	22uF	20%	25V	
C105	1-136-158-00	FILM	0.027uF	5%	50V	
C106	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C107	1-124-907-11	ELECT	10uF	20%	50V	
C108	1-126-233-11	ELECT	22uF	20%	50V	
C109	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C110	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C111	1-136-174-00	FILM	0.56uF	5%	50V	
C112	1-136-171-00	FILM	0.33uF	5%	50V	
C113	1-124-907-11	ELECT	10uF	20%	50V	
C114	1-124-902-00	ELECT	0.47uF	20%	50V	
C115	1-124-927-11	ELECT	4.7uF	20%	100V	
C116	1-124-927-11	ELECT	4.7uF	20%	100V	
C117	1-124-925-11	ELECT	2.2uF	20%	100V	
C118	1-162-285-31	CERAMIC	180PF	10%	50V	
C119	1-136-935-11	FILM	22PF	5%	630V	
C120	1-130-468-00	MYLAR	560PF	5%	50V	
C121	1-136-433-11	FILM	100PF	5%	630V	
C122	1-136-272-00	FILM	68PF	5%	630V	
C123	1-136-153-00	FILM	0.01uF	5%	50V	
C124	1-136-165-00	FILM	0.1uF	5%	50V	
C125	1-136-157-00	FILM	0.022uF	5%	50V	
C201	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C202	1-136-157-00	FILM	0.022uF	5%	50V	
C203	1-124-282-00	ELECT	22uF	20%	25V	
C205	1-136-158-00	FILM	0.027uF	5%	50V	
C206	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C207	1-124-907-11	ELECT	10uF	20%	50V	
C208	1-126-233-11	ELECT	22uF	20%	50V	
C209	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C210	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C211	1-136-174-00	FILM	0.56uF	5%	50V	
C212	1-136-171-00	FILM	0.33uF	5%	50V	
C213	1-124-907-11	ELECT	10uF	20%	50V	
C214	1-124-902-00	ELECT	0.47uF	20%	50V	
C215	1-124-927-11	ELECT	4.7uF	20%	100V	
C216	1-124-927-11	ELECT	4.7uF	20%	100V	
C217	1-124-925-11	ELECT	2.2uF	20%	100V	
C218	1-162-285-31	CERAMIC	180PF	10%	50V	
C219	1-136-935-11	FILM	22PF	5%	630V	
C220	1-130-468-00	MYLAR	560PF	5%	50V	
C221	1-136-433-11	FILM	100PF	5%	630V	
C222	1-136-272-00	FILM	68PF	5%	630V	
C223	1-136-153-00	FILM	0.01uF	5%	50V	
C224	1-136-165-00	FILM	0.1uF	5%	50V	
C225	1-136-157-00	FILM	0.022uF	5%	50V	
C301	1-124-443-00	ELECT	100uF	20%	10V	
C302	1-124-443-00	ELECT	100uF	20%	10V	
C303	1-124-907-11	ELECT	10uF	20%	50V	
C304	1-124-907-11	ELECT	10uF	20%	50V	
C305	1-124-478-11	ELECT	100uF	20%	25V	
C306	1-124-925-11	ELECT	2.2uF	20%	100V	
C307	1-124-902-00	ELECT	0.47uF	20%	50V	
C308	1-162-215-31	CERAMIC	47PF	5%	50V	
C309	1-161-494-00	CERAMIC	0.022uF		25V	
C310	1-162-286-31	CERAMIC	220PF	10%	50V	
C311	1-124-925-11	ELECT	2.2uF	20%	100V	
C312	1-124-477-11	ELECT	47uF	20%	25V	

Ref. No.	Part No.	Description				Remarks
C313	1-124-902-00	ELECT	0.47uF	20%	50V	
C314	1-124-478-11	ELECT	100uF	20%	25V	
C315	1-124-478-11	ELECT	100uF	20%	25V	
C316	1-130-856-00	FILM	0.0068uF	5%	100V	
C317	1-136-230-00	FILM	0.0022uF	5%	100V	
C318	1-136-230-00	FILM	0.0022uF	5%	100V	
C319	1-124-907-11	ELECT	10uF	20%	50V	
C320	1-161-494-00	CERAMIC	0.022uF	5%	25V	
C321	1-136-558-11	FILM	0.0039uF	5%	630V	
C322	1-107-046-00	MICA	4.7PF		500V	
C701	1-124-443-00	ELECT	100uF	20%	10V	
C702	1-164-159-11	CERAMIC	0.1uF		50V	
C703	1-164-159-11	CERAMIC	0.1uF		50V	
C704	1-164-159-11	CERAMIC	0.1uF		50V	
C705	1-124-443-00	ELECT	100uF	20%	10V	
C706	1-124-925-11	ELECT	2.2uF	20%	100V	
C707	1-164-159-11	CERAMIC	0.1uF		50V	
C708	1-136-165-00	FILM	0.1uF	5%	50V	
C709	1-136-165-00	FILM	0.1uF	5%	50V	
C720	1-164-159-11	CERAMIC	0.1uF		50V	
C750	1-161-494-00	CERAMIC	0.022uF		25V	
C751	1-161-494-00	CERAMIC	0.022uF		25V	
C752	1-161-494-00	CERAMIC	0.022uF		25V	
C753	1-161-494-00	CERAMIC	0.022uF		25V	
C754	1-161-494-00	CERAMIC	0.022uF		25V	
C801	1-124-907-11	ELECT	10uF	20%	50V	
C802	1-136-594-11	FILM	0.018uF	5%	100V	
C803	1-124-907-11	ELECT	10uF	20%	50V	
		(CONNECTOR)				
CN701	* 1-568-834-11	SOCKET, CONNECTOR 15P				
CN702	* 1-568-834-11	SOCKET, CONNECTOR 15P				
CNP301	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P				
CNP302	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P				
CNP303	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P				
CNP304	* 1-564-511-11	PLUG, CONNECTOR 8P				
CNP305	* 1-564-518-11	PLUG, CONNECTOR 3P				
CNP702	* 1-564-339-00	PIN, CONNECTOR 5P				
CNP703	* 1-564-505-11	PLUG, CONNECTOR 2P				
		(COMPOSITION CIRCUIT BLOCK)				
CP701	1-233-199-11	COMPOSITION CIRCUIT BLOCK				
CP702	1-233-199-11	COMPOSITION CIRCUIT BLOCK				
CP703	1-232-944-11	COMPOSITION CIRCUIT BLOCK				

Ref. No.	Part No.	Description		Remarks
		(DIODE)		
D101	8-719-912-20	DIODE	1SS120	
D201	8-719-912-20	DIODE	1SS120	
D301	8-719-912-20	DIODE	1SS120	
D302	8-719-912-20	DIODE	1SS120	
D303	8-719-912-20	DIODE	1SS120	
D304	8-719-933-50	DIODE	HZS7C2L	
D305	8-719-912-20	DIODE	1SS120	
D306	8-719-912-20	DIODE	1SS120	
D307	8-719-912-20	DIODE	1SS120	
D308	8-719-912-20	DIODE	1SS120	
D309	8-719-912-20	DIODE	1SS120	
D601	8-719-301-38	DIODE	SEL2210S-C(AUTO REC LEVEL)	
D701	8-719-912-20	DIODE	1SS120	
D702	8-719-912-20	DIODE	1SS120	
D703	8-719-933-50	DIODE	HZS7C2L	
D704	8-719-933-50	DIODE	HZS7C2L	
D705	8-719-933-50	DIODE	HZS7C2L	
D706	8-719-933-50	DIODE	HZS7C2L	
D707	8-719-933-50	DIODE	HZS7C2L	
D708	8-719-933-50	DIODE	HZS7C2L	
D709	8-719-933-50	DIODE	HZS7C2L	
D710	8-719-933-50	DIODE	HZS7C2L	
D711	8-719-933-50	DIODE	HZS7C2L	
D712	8-719-933-50	DIODE	HZS7C2L	
D713	8-719-912-20	DIODE	1SS120	
D714	8-719-912-20	DIODE	1SS120	
D720	8-719-200-77	DIODE	10E2N	
D721	8-719-200-77	DIODE	10E2N	
D722	8-719-200-77	DIODE	10E2N	
D750	8-719-933-47	DIODE	HZS7B2L	
D751	8-719-933-47	DIODE	HZS7B2L	
D752	8-719-912-20	DIODE	1SS120	
D753	8-719-912-20	DIODE	1SS120	
D801	8-719-109-89	DIODE	RD5.6ESB2	
D802	8-719-200-77	DIODE	10E2N	
D803	8-719-200-77	DIODE	10E2N	
D804	8-719-200-77	DIODE	10E2N	
D805	8-719-200-77	DIODE	10E2N	

MAIN

Ref. No.	Part No.	Description	Remarks
		< IC >	
IC301	8-759-111-44	IC uPC4570C-1	
IC302	8-752-036-34	IC CXA1330S	
IC303	8-752-038-02	IC CXA1198AP	
IC304	8-759-945-58	IC RC4558P	
IC305	8-759-945-58	IC RC4558P	
IC306	8-759-106-56	IC uPC1297CA	
IC701	8-759-633-86	IC M50747-B83SP	
IC702	8-759-634-79	IC M50944-155SP	
IC703	8-759-973-95	IC BA6219B	
IC704	8-759-822-09	IC LB1641	
IC705	8-759-240-69	IC TC4069UBP	
IC706	8-759-822-09	IC LB1641	
		< COIL >	
L101	1-410-780-11	INDUCTOR 27mH	
L201	1-410-780-11	INDUCTOR 27mH	
L301	1-408-080-00	INDUCTOR 100uH	
L801	1-410-761-11	INDUCTOR 0.68mH	
L802	1-408-575-11	INDUCTOR 100uH	
L803	1-408-575-11	INDUCTOR 100uH	
		< FILTER >	
LPF101	1-236-087-11	FILTER, LOW PASS	
LPF201	1-236-087-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q101	8-729-900-89	TRANSISTOR DTC144ES	
Q102	8-729-900-74	TRANSISTOR DTC143TS	
Q103	8-729-821-31	TRANSISTOR 2SD1012-FG	
Q201	8-729-900-89	TRANSISTOR DTC144ES	
Q202	8-729-900-74	TRANSISTOR DTC143TS	
Q203	8-729-821-31	TRANSISTOR 2SD1012-FG	
Q301	8-729-900-65	TRANSISTOR DTA144ES	
Q302	8-729-900-89	TRANSISTOR DTC144ES	
Q303	8-729-900-89	TRANSISTOR DTC144ES	
Q304	8-729-820-24	TRANSISTOR 2SC3330-T	
Q305	8-729-900-89	TRANSISTOR DTC144ES	
Q306	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q307	8-729-900-65	TRANSISTOR DTA144ES	
Q308	8-729-900-65	TRANSISTOR DTA144ES	
Q309	8-729-900-89	TRANSISTOR DTC144ES	
Q310	8-729-900-65	TRANSISTOR DTA144ES	
Q311	8-729-900-61	TRANSISTOR DTA114ES	
Q312	8-729-900-80	TRANSISTOR DTC114ES	
Q313	8-729-900-80	TRANSISTOR DTC114ES	
Q314	8-729-900-80	TRANSISTOR DTC114ES	
Q315	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q316	8-729-194-57	TRANSISTOR 2SC945-P	
Q317	8-729-194-57	TRANSISTOR 2SC945-P	
Q318	8-729-900-65	TRANSISTOR DTA144ES	
Q701	8-729-900-80	TRANSISTOR DTC114ES	
Q702	8-729-900-80	TRANSISTOR DTC114ES	
Q703	8-729-900-80	TRANSISTOR DTC114ES	
Q704	8-729-820-24	TRANSISTOR 2SC3330-T	
Q705	8-729-820-24	TRANSISTOR 2SC3330-T	
Q706	8-729-900-89	TRANSISTOR DTC144ES	
Q707	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q708	8-729-900-61	TRANSISTOR DTA114ES	
Q709	8-729-900-61	TRANSISTOR DTA114ES	
Q712	8-729-900-65	TRANSISTOR DTA144ES	
Q713	8-729-900-65	TRANSISTOR DTA144ES	
Q715	8-729-900-80	TRANSISTOR DTC114ES	
Q801	8-729-140-96	TRANSISTOR 2SD774-34	
Q802	8-729-140-96	TRANSISTOR 2SD774-34	
		< RESISTOR >	
R101	1-249-435-11	CARBON 33K 5% 1/4W	
R102	1-249-403-11	CARBON 68 5% 1/4W	
R103	1-247-882-11	CARBON 130K 5% 1/4W	
R104	1-249-426-11	CARBON 5.6K 5% 1/4W	
R105	1-249-420-11	CARBON 1.8K 5% 1/4W	
R107	1-247-887-00	CARBON 220K 5% 1/4W	
R108	1-247-840-00	CARBON 2.4K 5% 1/4W	
R110	1-249-423-11	CARBON 3.3K 5% 1/4W	
R111	1-249-428-11	CARBON 8.2K 5% 1/4W	
R112	1-247-864-11	CARBON 24K 5% 1/4W	
R113	1-249-414-11	CARBON 560 5% 1/4W	
R114	1-249-417-11	CARBON 1K 5% 1/4W	
R115	1-247-846-11	CARBON 4.3K 5% 1/4W	
R116	1-249-423-11	CARBON 3.3K 5% 1/4W	
R117	1-249-417-11	CARBON 1K 5% 1/4W	

MAIN

Ref. No.	Part No.	Description				Remarks
R118	1-249-429-11	CARBON	10K	5%	1/4W	
R119	1-249-425-11	CARBON	4.7K	5%	1/4W	
R120	1-249-421-11	CARBON	2.2K	5%	1/4W	
R121	1-249-429-11	CARBON	10K	5%	1/4W	
R122	1-249-425-11	CARBON	4.7K	5%	1/4W	
R124	1-249-429-11	CARBON	10K	5%	1/4W	
R125	1-249-437-11	CARBON	47K	5%	1/4W	
R126	1-249-431-11	CARBON	15K	5%	1/4W	
R127	1-249-409-11	CARBON	220	5%	1/4W	
R128	1-249-428-11	CARBON	8.2K	5%	1/4W	
R129	1-247-883-00	CARBON	150K	5%	1/4W	
R130	1-249-393-11	CARBON	10	5%	1/4W	
R131	1-249-432-11	CARBON	18K	5%	1/4W	
R132	1-249-439-11	CARBON	10K	5%	1/4W	
R201	1-249-435-11	CARBON	33K	5%	1/4W	
R202	1-249-403-11	CARBON	68	5%	1/4W	
R203	1-247-882-11	CARBON	130K	5%	1/4W	
R204	1-249-426-11	CARBON	5.6K	5%	1/4W	
R205	1-249-420-11	CARBON	1.8K	5%	1/4W	
R207	1-247-887-00	CARBON	220K	5%	1/4W	
R208	1-247-840-00	CARBON	2.4K	5%	1/4W	
R210	1-249-423-11	CARBON	3.3K	5%	1/4W	
R211	1-249-428-11	CARBON	8.2K	5%	1/4W	
R212	1-247-864-11	CARBON	24K	5%	1/4W	
R213	1-249-414-11	CARBON	560	5%	1/4W	
R215	1-247-846-11	CARBON	4.3K	5%	1/4W	
R216	1-249-423-11	CARBON	3.3K	5%	1/4W	
R217	1-249-417-11	CARBON	1K	5%	1/4W	
R218	1-249-429-11	CARBON	10K	5%	1/4W	
R219	1-249-425-11	CARBON	4.7K	5%	1/4W	
R220	1-249-421-11	CARBON	2.2K	5%	1/4W	
R221	1-249-429-11	CARBON	10K	5%	1/4W	
R222	1-249-425-11	CARBON	4.7K	5%	1/4W	
R224	1-249-429-11	CARBON	10K	5%	1/4W	
R225	1-249-437-11	CARBON	47K	5%	1/4W	
R226	1-249-431-11	CARBON	15K	5%	1/4W	
R227	1-249-409-11	CARBON	220	5%	1/4W	
R228	1-249-428-11	CARBON	8.2K	5%	1/4W	
R229	1-247-883-00	CARBON	150K	5%	1/4W	
R230	1-249-393-11	CARBON	10	5%	1/4W	
R231	1-247-432-11	CARBON	18K	5%	1/4W	
R232	1-249-439-11	CARBON	10K	5%	1/4W	
R301	1-249-409-11	CARBON	220	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	
R303	1-249-433-11	CARBON	22K	5%	1/4W	

Ref. No.	Part No.	Description				Remarks
R304	1-249-435-11	CARBON	33K	5%	1/4W	
R305	1-249-436-11	CARBON	39K	5%	1/4W	
R306	1-247-880-11	CARBON	110K	5%	1/4W	
R307	1-247-885-00	CARBON	180K	5%	1/4W	
R308	1-249-436-11	CARBON	39K	5%	1/4W	
R309	1-247-881-00	CARBON	120K	5%	1/4W	
R310	1-247-874-11	CARBON	62K	5%	1/4W	
R311	1-247-872-11	CARBON	51K	5%	1/4W	
R312	1-247-889-00	CARBON	270K	5%	1/4W	
R313	1-247-883-00	CARBON	150K	5%	1/4W	
R314	1-247-870-11	CARBON	43K	5%	1/4W	
R315	1-247-893-11	CARBON	390K	5%	1/4W	
R316	1-249-438-11	CARBON	56K	5%	1/4W	
R317	1-247-872-11	CARBON	51K	5%	1/4W	
R318	1-247-876-11	CARBON	75K	5%	1/4W	
R319	1-249-441-11	CARBON	100K	5%	1/4W	
R320	1-249-438-11	CARBON	56K	5%	1/4W	
R321	1-247-881-00	CARBON	120K	5%	1/4W	
R322	1-249-433-11	CARBON	22K	5%	1/4W	
R323	1-249-409-11	CARBON	220	5%	1/4W	
R324	1-249-433-11	CARBON	22K	5%	1/4W	
R325	1-249-433-11	CARBON	22K	5%	1/4W	
R326	1-249-425-11	CARBON	4.7K	5%	1/4W	
R327	1-247-887-00	CARBON	220K	5%	1/4W	
R328	1-249-429-11	CARBON	10K	5%	1/4W	
R329	1-249-441-11	CARBON	100K	5%	1/4W	
R330	1-249-428-11	CARBON	8.2K	5%	1/4W	
R331	1-249-423-11	CARBON	3.3K	5%	1/4W	
R332	1-249-417-11	CARBON	1K	5%	1/4W	
R333	1-249-441-11	CARBON	100K	5%	1/4W	
R334	1-249-441-11	CARBON	100K	5%	1/4W	
R335	1-249-419-11	CARBON	1.5K	5%	1/4W	
R336	1-247-850-11	CARBON	6.2K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	
R338	1-249-429-11	CARBON	10K	5%	1/4W	
R339	1-249-429-11	CARBON	10K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
R342	⚠1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R343	1-215-455-00	METAL	27K	1%	1/6W	
R344	1-247-864-11	CARBON	24K	5%	1/4W	
R345	1-249-437-11	CARBON	47K	5%	1/4W	
R601	1-249-410-11	CARBON	270	5%	1/4W	
R602	1-249-415-11	CARBON	680	5%	1/4W	
R701	1-249-429-11	CARBON	10K	5%	1/4W	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

MAIN **MD**

Ref. No.	Part No.	Description	Remarks
R702	1-249-429-11	CARBON 10K 5% 1/4W	
R703	1-249-425-11	CARBON 4.7K 5% 1/4W	
R704	1-249-425-11	CARBON 4.7K 5% 1/4W	
R705	1-249-425-11	CARBON 4.7K 5% 1/4W	
R706	1-247-903-00	CARBON 1M 5% 1/4W	
R707	1-249-433-11	CARBON 22K 5% 1/4W	
R708	1-249-411-11	CARBON 330 5% 1/4W	
R709	1-247-830-11	CARBON 910 5% 1/4W	
R710	1-249-418-11	CARBON 1.2K 5% 1/4W	
R711	1-249-417-11	CARBON 1K 5% 1/4W	
R712	⚠1-212-950-00	FUSIBLE 4.7 5% 1/2W	F
R713	1-249-421-11	CARBON 2.2K 5% 1/4W	
R714	1-249-419-11	CARBON 1.5K 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	⚠1-212-950-00	FUSIBLE 4.7 5% 1/2W	F
R717	1-249-436-11	CARBON 39K 5% 1/4W	
R718	1-249-436-11	CARBON 39K 5% 1/4W	
R719	1-247-887-00	CARBON 220K 5% 1/4W	
R720	1-247-887-00	CARBON 220K 5% 1/4W	
R721	1-249-425-11	CARBON 4.7K 5% 1/4W	
R722	1-249-425-11	CARBON 4.7K 5% 1/4W	
R724	1-249-433-11	CARBON 22K 5% 1/4W	
R725	1-247-903-00	CARBON 1M 5% 1/4W	
R726	1-249-429-11	CARBON 10K 5% 1/4W	
R727	1-249-425-11	CARBON 4.7K 5% 1/4W	
R728	1-249-425-11	CARBON 4.7K 5% 1/4W	
R729	1-249-425-11	CARBON 4.7K 5% 1/4W	
R730	1-249-433-11	CARBON 22K 5% 1/4W	
R731	1-249-433-11	CARBON 22K 5% 1/4W	
R732	1-249-424-11	CARBON 3.9K 5% 1/4W	
R733	1-249-429-11	CARBON 10K 5% 1/4W	
R734	1-249-441-11	CARBON 100K 5% 1/4W	
R735	1-249-439-11	CARBON 68K 5% 1/4W	
R736	1-249-417-11	CARBON 1K 5% 1/4W	
R737	1-249-417-11	CARBON 1K 5% 1/4W	
R738	⚠1-212-950-00	FUSIBLE 4.7 5% 1/2W	F
R739	1-249-429-11	CARBON 10K 5% 1/4W	
R740	1-249-429-11	CARBON 10K 5% 1/4W	
R741	1-249-415-11	CARBON 680 5% 1/4W	
R742	1-249-420-11	CARBON 1.8K 5% 1/4W	
R743	1-249-410-11	CARBON 270 5% 1/4W	
R744	1-249-421-11	CARBON 2.2K 5% 1/4W	
R745	1-249-421-11	CARBON 2.2K 5% 1/4W	
R746	1-249-421-11	CARBON 2.2K 5% 1/4W	
R747	1-249-421-11	CARBON 2.2K 5% 1/4W	
R748	1-249-429-11	CARBON 10K 5% 1/4W	
R749	1-249-429-11	CARBON 10K 5% 1/4W	
R771	1-249-405-11	CARBON 100 5% 1/4W	
R772	1-249-405-11	CARBON 100 5% 1/4W	
R773	1-249-405-11	CARBON 100 5% 1/4W	
R780	1-249-433-11	CARBON 22K 5% 1/4W	
R801	1-249-431-11	CARBON 15K 5% 1/4W	
R802	1-249-431-11	CARBON 15K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV101	1-238-597-11	RES, ADJ, CARBON 1K	
RV102	1-238-600-11	RES, ADJ, CARBON 10K	
RV103	1-238-601-11	RES, ADJ, CARBON 22K	
RV201	1-238-597-11	RES, ADJ, CARBON 1K	
RV202	1-238-600-11	RES, ADJ, CARBON 10K	
RV203	1-238-601-11	RES, ADJ, CARBON 22K	
RV301	1-241-232-11	RES, VAR, CARBON 20K/20K/20K(REC LEVEL)	
		< RELAY >	
RY301	1-515-726-11	RELAY	
		< SWITCH >	
S601	1-554-303-21	SWITCH, TACTILE (AUTO REC LEVEL)	
S605	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	
		< TRANSFORMER >	
T101	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T201	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T301	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T801	1-450-673-11	TRANSFORMER, DC-DC CONVERTER	
		< CRYSTAL >	
X701	1-577-358-21	VIBRATOR, CERAMIC 4MHz	
X702	1-577-358-21	VIBRATOR, CERAMIC 4MHz	

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Ref. No.	Part No.	Description	Remarks
	* 1-632-740-11	MD BOARD ********	
	3-356-631-01	HOLDER (SENSOR)	
		< CONNECTOR >	
CN1001	1-506-615-11	PIN, CONNECTOR 9P	
CN1002	* 1-564-502-11	PIN, CONNECTOR 10P	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
TB1001	* 1-569-066-11	PIN, CONNECTOR 5P	
		< IC >	
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B(SUPPLY REEL)	
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B (TAKE UP REEL)	
		< RESISTOR >	
R1001	1-249-408-11	CARBON 180 5% 1/4W	
R1002	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S1001	1-466-526-11	ENCODER, ROTARY	
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)	
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)	
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)	
S1005	1-572-125-11	SWITCH, LEAF (FWD TAB)	
S1006	1-572-202-11	SWITCH, LEAF (HALF)	
S1007	1-572-125-11	SWITCH, LEAF (METAL)	
S1008	1-572-125-11	SWITCH, LEAF (70uS)	
S1009	1-572-125-11	SWITCH, LEAF (REV TAB)	

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Ref. No.	Part No.	Description	Remarks
	* A-2006-453-A	PANEL BOARD, COMPLETE ********************	
	* 3-368-109-01	HOLDER, FL TUBE	
	* 4-921-941-01	CUSHION (FL)	
		< CAPACITOR >	
C601	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C602	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C603	1-163-137-00	CERAMIC CHIP 680P 10% 50V	
C604	1-163-137-00	CERAMIC CHIP 680P 10% 50V	
C605	1-163-137-00	CERAMIC CHIP 680P 10% 50V	
C606	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
		< CONNECTOR >	
CN601	* 1-568-858-11	SOCKET, CONNECTOR 15P	
CNP601	* 1-564-495-11	PIN, CONNECTOR 2P	
		< DIODE >	
D601	8-719-301-38	DIODE SEL2210-C	
D602	8-719-988-62	DIODE 1SS355	

Ref. No.	Part No.	Description	Remarks
D603	8-719-988-62	DIODE 1SS355	
		< INDICATOR >	
FL601	1-519-656-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC601	8-759-323-62	IC HD614023FA89	
		< RESISTOR >	
R603	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R604	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R605	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R606	1-216-029-00	METAL CHIP 150 5% 1/10W	
R607	1-216-033-00	METAL CHIP 220 5% 1/10W	
R608	1-216-037-00	METAL CHIP 330 5% 1/10W	
R609	1-216-041-00	METAL CHIP 470 5% 1/10W	
R610	1-216-045-00	METAL CHIP 680 5% 1/10W	
R611	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R612	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R613	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R614	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R615	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R616	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R617	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R618	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R620	1-216-025-00	METAL CHIP 100 5% 1/10W	
R621	1-216-025-00	METAL CHIP 100 5% 1/10W	
R622	1-216-025-00	METAL CHIP 100 5% 1/10W	
		< SWITCH >	
S602	1-554-303-21	SWITCH, TACTILE (◁◁)	
S603	1-554-303-21	SWITCH, TACTILE (▷▷)	
S604	1-554-303-21	SWITCH, TACTILE (● REC)	
S606	1-554-303-21	SWITCH, TACTILE (□)	
S607	1-554-303-21	SWITCH, TACTILE (▷)	
S608	1-554-303-21	SWITCH, TACTILE (◁)	
S609	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)	
S610	1-554-303-21	SWITCH, TACTILE (○ MUTE)	
S611	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)	
S612	1-570-834-11	SWITCH, SLIDE (DOLBY NR)	
S613	1-570-842-11	SWITCH, SLIDE (DIRECTION MODE)	
		< CRYSTAL >	
X601	1-577-359-21	VIBRATOR, CERAMIC 4.19MHz	

PIN JACK

Ref. No.	Part No.	Description	Remarks
		**	
	* A-2006-548-A	PIN JACK BOARD, COMPLETE	
		************************	
		< CAPACITOR >	
C401	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C402	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C403	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C404	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C405	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C407	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C409	1-124-465-00	ELECT 0.47uF 20% 50V	
C410	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C411	1-126-163-11	ELECT 4.7uF 20% 50V	
C412	1-163-018-00	CERAMIC CHIP 0.0056uF 5% 50V	
C413	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C414	1-124-257-00	ELECT 2.2uF 20% 50V	
C416	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C417	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C418	1-126-157-11	ELECT 10uF 20% 16V	
C419	1-126-157-11	ELECT 10uF 20% 16V	
C451	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C452	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C453	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C454	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C455	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C457	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C459	1-124-465-00	ELECT 0.47uF 20% 50V	
C460	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C461	1-126-163-11	ELECT 4.7uF 20% 50V	
C462	1-163-018-00	CERAMIC CHIP 0.0056uF 5% 50V	
C463	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C464	1-124-257-00	ELECT 2.2uF 20% 50V	
C466	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C467	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C468	1-126-012-11	ELECT 470uF 20% 16V	
C469	1-126-012-11	ELECT 470uF 20% 16V	
C470	1-126-012-11	ELECT 470uF 20% 16V	
C481	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C482	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C483	1-126-177-11	ELECT 100uF 20% 10V	
C484	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C485	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C486	1-126-157-11	ELECT 10uF 20% 16V	
C487	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C488	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C489	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C490	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C491	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C492	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C493	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C494	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C495	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C496	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C497	1-126-301-11	ELECT 1uF 20% 50V	
C4001	1-163-119-00	CERAMIC CHIP 120PF 5% 50V	
C4002	1-163-119-00	CERAMIC CHIP 120PF 5% 50V	
C4003	1-124-589-11	ELECT 47uF 20% 16V	
C4010	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C4013	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C4020	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C4021	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C4022	1-124-589-11	ELECT 47uF 20% 16V	
		< CONNECTOR >	
CN401	* 1-568-834-11	SOCKET, CONNECTOR 15P	
CNJ401	* 1-580-740-11	SOCKET, CONNECTOR 17P	
CNJ402	* 1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P	
CNJ403	* 1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P	
		< DIODE >	
D401	8-719-990-36	DIODE DCA010	
D403	8-719-210-33	DIODE EC10DS2	
D404	8-719-210-33	DIODE EC10DS2	
D405	8-719-990-36	DIODE DCA010	
D4001	8-719-988-62	DIODE 1SS355	
D4002	8-719-988-62	DIODE 1SS355	
		< IC >	
IC401	8-759-636-55	IC M5218AFP	
IC402	8-759-636-55	IC M5218AFP	
IC403	8-759-009-05	IC MC14051BF	
IC404	8-759-009-05	IC MC14051BF	
IC405	8-759-516-47	IC CD4066BCM	
IC406	8-759-636-35	IC M50760-315FP	
IC407	8-759-991-77	IC BA7625	

(JACK)

Ref. No.	Part No.	Description	Remarks
J401	1-565-304-11	JACK, PIN 4P (AUDIO)	
J402	* 1-569-812-11	JACK, PIN 6P (AUDIO)	
J403	1-565-933-11	JACK, PIN 3P (VIDEO)	
J404	1-573-144-11	JACK, PIN 2P (VIDEO)	

(JUMPER)

Ref. No.	Part No.	Description	Remarks
JW2	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW3	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW8	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW10	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW12	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW413	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW414	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW439	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW441	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW463	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW464	1-216-295-00	METAL CHIP 0 5% 1/10W	

(COIL)

Ref. No.	Part No.	Description	Remarks
L401	1-408-789-21	INDUCTOR, CHIP 100uH	
L4001	1-408-777-00	INDUCTOR, CHIP 10uF	

(TRANSISTOR)

Ref. No.	Part No.	Description	Remarks
Q401	8-729-805-65	TRANSISTOR 2SA1344	
Q402	8-729-805-65	TRANSISTOR 2SA1344	
Q403	8-729-602-36	TRANSISTOR 2SA1602-F	
Q404	8-729-602-36	TRANSISTOR 2SA1602-F	
Q405	8-729-602-36	TRANSISTOR 2SA1602-F	
Q406	8-729-602-36	TRANSISTOR 2SA1602-F	
Q407	8-729-602-21	TRANSISTOR 2SC4154-F	

(RESISTOR)

Ref. No.	Part No.	Description	Remarks
R401	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R402	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R403	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R404	1-216-041-00	METAL CHIP 470 5% 1/10W	
R405	1-216-041-00	METAL CHIP 470 5% 1/10W	
R407	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R408	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R409	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R410	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R411	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R415	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R417	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R418	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R419	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R420	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R421	1-216-001-00	METAL CHIP 10 5% 1/10W	
R422	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R423	1-216-041-00	METAL CHIP 470 5% 1/10W	
R425	1-216-025-00	METAL CHIP 100 5% 1/10W	
R426	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R427	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R428	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R429	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R430	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R431	1-216-022-00	METAL CHIP 75 5% 1/10W	
R432	1-216-022-00	METAL CHIP 75 5% 1/10W	
R434	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R435	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R436	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R437	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R440	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R442	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R450	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R451	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R452	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R453	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R454	1-216-041-00	METAL CHIP 470 5% 1/10W	
R455	1-216-041-00	METAL CHIP 470 5% 1/10W	
R457	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R458	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R459	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R460	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R461	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R465	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R467	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R468	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R469	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R470	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R471	1-216-001-00	METAL CHIP 10 5% 1/10W	
R472	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R473	1-216-041-00	METAL CHIP 470 5% 1/10W	
R475	1-216-025-00	METAL CHIP 100 5% 1/10W	
R476	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R477	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R478	1-216-089-00	METAL CHIP 47K 5% 1/10W	

PIN JACK POWER

Ref. No.	Part No.	Description	Remarks
R481	1-216-022-00	METAL CHIP 75 5% 1/10W	
R482	1-216-022-00	METAL CHIP 75 5% 1/10W	
R483	1-216-022-00	METAL CHIP 75 5% 1/10W	
R484	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R485	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R486	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R487	1-216-029-00	METAL CHIP 150 5% 1/10W	
R488	1-216-029-00	METAL CHIP 150 5% 1/10W	
R489	1-216-031-00	METAL CHIP 180 5% 1/10W	
R490	1-216-031-00	METAL CHIP 180 5% 1/10W	
R491	1-216-031-00	METAL CHIP 180 5% 1/10W	
R492	1-216-029-00	METAL CHIP 150 5% 1/10W	
R493	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R494	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R495	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R496	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R497	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R499	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R500	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

(CRYSTAL)

Ref. No.	Part No.	Description	Remarks
X401	1-577-077-11	OSCILLATOR, CERAMIC 400KHz	

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* 1-639-415-11 POWER BOARD
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7-685-646-79 SCREW +BVTP 3X8 TYPE N-S

(CAPACITOR)

Ref. No.	Part No.	Description	Remarks
C501	1-124-556-11	ELECT 2200uF 20% 16V	
C502	1-124-556-11	ELECT 2200uF 20% 16V	
C503	1-124-360-00	ELECT 1000uF 20% 16V	
C504	1-124-556-11	ELECT 2200uF 20% 16V	
C505	1-126-059-11	ELECT 10uF 20% 50V	
C506	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C507	1-124-903-11	ELECT 1uF 20% 50V	
C508	1-124-472-11	ELECT 470uF 20% 10V	
C509	1-124-472-11	ELECT 470uF 20% 10V	
C510	1-124-477-11	ELECT 47uF 20% 25V	
C511	1-124-903-11	ELECT 1uF 20% 50V	
C512	1-124-477-11	ELECT 47uF 20% 25V	
C513	1-124-903-11	ELECT 1uF 20% 50V	
C514	1-124-472-11	ELECT 470uF 20% 10V	
C515	1-124-477-11	ELECT 47uF 20% 25V	
C516	1-124-903-11	ELECT 1uF 20% 50V	
C518	1-124-473-11	ELECT 1000uF 20% 10V	
C519	1-124-473-11	ELECT 1000uF 20% 10V	
C520	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C521	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C526	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C527	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C528	1-164-232-11	CERAMIC CHIP 0.01uF 10% 50V	
C5001	1-163-009-11	CERAMIC CHIP 1000P 10% 50V	
C5002	1-163-009-11	CERAMIC CHIP 1000P 10% 50V	
C5004	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C5005	1-164-232-11	CERAMIC CHIP 0.01uF 10% 50V	
C5007	1-164-346-11	CERAMIC CHIP 1uF 16V	

(CONNECTOR)

Ref. No.	Part No.	Description	Remarks
CN402	* 1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P	
CN403	* 1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P	

(DIODE)

Ref. No.	Part No.	Description	Remarks
D501	8-719-210-33	DIODE EC10DS2	
D502	8-719-210-33	DIODE EC10DS2	
D503	8-719-210-33	DIODE EC10DS2	
D504	8-719-210-33	DIODE EC10DS2	
D505	8-719-988-62	DIODE 1SS355	
D506	8-719-106-36	DIODE RD8.2M-B3	
D508	8-719-210-33	DIODE EC10DS2	
D509	8-719-210-33	DIODE EC10DS2	
D510	8-719-210-33	DIODE EC10DS2	
D511	8-719-210-33	DIODE EC10DS2	

(FUSE)

Ref. No.	Part No.	Description	Remarks
F501	⚠1-532-843-21	FUSE 2.5A	
F502	⚠1-532-843-21	FUSE 2.5A	

(IC)

Ref. No.	Part No.	Description	Remarks
IC501	8-759-823-46	IC LA5603	

(TRANSISTOR)

Ref. No.	Part No.	Description	Remarks
Q501	8-729-209-15	TRANSISTOR 2SD2012	
Q502	8-729-111-67	TRANSISTOR 2SB1094-L	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-602-21	TRANSISTOR 2SC4154-F	
Q505	8-729-602-21	TRANSISTOR 2SC4154-F	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
Q506	8-729-602-36	TRANSISTOR 2SA1602-EF	
Q510	8-729-805-49	TRANSISTOR 2SC3398	
Q511	8-729-602-36	TRANSISTOR 2SA1602-EF	
		< RESISTOR >	
R501	1-216-033-00	METAL CHIP 220 5% 1/10W	
R502	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R503	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R504	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R505	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R520	1-216-058-00	METAL CHIP 2.4K 5% 1/10W	
R521	1-216-056-00	METAL CHIP 2K 5% 1/10W	
R5001	1-216-025-00	METAL CHIP 100 5% 1/10W	
R5002	1-216-025-00	METAL CHIP 100 5% 1/10W	

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Ref. No.	Part No.	Description	Remarks
	* 1-632-741-11	REEL MOTOR BOARD ***************	
		< CAPACITOR >	
C1051	1-124-907-11	ELECT 10uF 20% 50V	
C1052	1-124-907-11	ELECT 10uF 20% 50V	
C1053	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
CN1051	* 1-564-499-11	PIN, CONNECTOR 6P	
CN1052	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
CN1053	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
		< RESISTOR >	
R1051	1-249-414-11	CARBON 560 5% 1/4W	

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Ref. No.	Part No.	Description	Remarks
	* 1-634-323-11	TRANSLATION BOARD *****************	
		< CONNECTOR >	
CN1091	* 1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P	
CN1092	* 1-564-509-11	PLUG, CONNECTOR 6P	

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Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS *************	
4	1-575-906-11	WIRE, FLAT TYPE (15 CORE)	
11	* 1-573-188-11	CONNECTOR, BRIDGE 7P	
12	* 1-573-389-11	COONECTOR, BRIDGE 8P	
13	1-575-664-11	WIRE, FLAT TYPE (15 CORE)	
D1051	8-719-980-85	DIODE SLF-325C	
HRPE1001	A-2003-772-A	BASE ASSY, HEAD	
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY	
S1001	1-466-525-11	ENCODER, ROTARY	

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HARDWARE LIST

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# 1	7-621-773-93	SCREW (PANEL 2.6 TP2)
# 2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
# 3	7-682-547-04	SCREW +BVTT 3X6 (S)
# 4	7-621-283-00	SCREW +BVTT 2X5 (S)
# 5	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S
# 6	7-621-255-20	SCREW +BVTT 2X4 (S)
# 7	7-621-255-35	SCREW +BVTT 2X5 (S)
# 8	7-621-770-67	SCREW +BVTT 2.6X6 (S)
# 9	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S
#10	7-621-849-00	SCREW (BV/RING)
# 11	7-621-255-15	SCREW +PTT 2X3 (S)

English
91F1667-1

Sony Corporation
Audio Group

9-956-358-11

Printed by: Schaltungsdienst Lange, Berlin (Germany)

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Published by Customer Relations and Service Group

TC-H5600

SONY
SERVICE MANUAL

AEP Model
UK Model
E Model

SUPPLEMENT-1

File this Supplement with the Service Manual.

Subject : Circuit change

English
9410976-1

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Published by Home A&V Products Div.
Quality Engineering Dept.

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

SECTION 6
ELECTRICAL PARTS LIST

MAIN

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.

- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remark
*	A-2006-452-A	MAIN BOARD, COMPLETE ********************			
*	1-573-496-11	HOUSING, CONNECTOR 12P			
*	1-573-497-11	PIN, CONNECTOR (PC BOARD) 12P BOARD			
*	3-356-925-01	HEAT SINK			
	7-682-548-04	SCREW +BVTT 3X8 (S)			
		< CAPACITOR >			
C101	1-162-294-31	CERAMIC	0.001uF	10%	50V
C102	1-136-157-00	FILM	0.022uF	5%	50V
C103	1-124-282-00	ELECT	22uF	20%	25V
C105	1-136-158-00	FILM	0.027uF	5%	50V
C106	1-162-294-31	CERAMIC	0.001uF	10%	50V
C107	1-124-907-11	ELECT	10uF	20%	50V
C108	1-124-916-11	ELECT	22uF	20%	63V
C109	1-130-475-00	MYLAR	0.0022uF	5%	50V
C110	1-130-475-00	MYLAR	0.0022uF	5%	50V
C111	1-136-174-00	FILM	0.56uF	5%	50V
C112	1-136-171-00	FILM	0.33uF	5%	50V
C113	1-124-907-11	ELECT	10uF	20%	50V
C114	1-124-902-00	ELECT	0.47uF	20%	50V
C115	1-124-927-11	ELECT	4.7uF	20%	100V
C116	1-124-927-11	ELECT	4.7uF	20%	100V
C117	1-124-925-11	ELECT	2.2uF	20%	100V
C118	1-162-285-31	CERAMIC	180PF	10%	50V
C119	1-136-935-11	FILM	22PF	5%	630V
C120	1-130-468-00	MYLAR	560PF	5%	50V
C121	1-136-433-11	FILM	100PF	5%	630V
C122	1-136-272-00	FILM	68PF	5%	630V
C123	1-136-153-00	FILM	0.01uF	5%	50V
C124	1-136-165-00	FILM	0.1uF	5%	50V
C125	1-136-157-00	FILM	0.022uF	5%	50V
C201	1-162-294-31	CERAMIC	0.001uF	10%	50V
C202	1-136-157-00	FILM	0.022uF	5%	50V
C203	1-124-282-00	ELECT	22uF	20%	25V
C205	1-136-158-00	FILM	0.027uF	5%	50V
C206	1-162-294-31	CERAMIC	0.001uF	10%	50V
C207	1-124-907-11	ELECT	10uF	20%	50V
C208	1-124-916-11	ELECT	22uF	20%	63V
C209	1-130-475-00	MYLAR	0.0022uF	5%	50V
C210	1-130-475-00	MYLAR	0.0022uF	5%	50V
C211	1-136-174-00	FILM	0.56uF	5%	50V
C212	1-136-171-00	FILM	0.33uF	5%	50V
C213	1-124-907-11	ELECT	10uF	20%	50V
C214	1-124-902-00	ELECT	0.47uF	20%	50V
C215	1-124-927-11	ELECT	4.7uF	20%	100V
C216	1-124-927-11	ELECT	4.7uF	20%	100V
C217	1-124-925-11	ELECT	2.2uF	20%	100V
C218	1-162-285-31	CERAMIC	180PF	10%	50V
C219	1-136-935-11	FILM	22PF	5%	630V
C220	1-130-468-00	MYLAR	560PF	5%	50V
C221	1-136-433-11	FILM	100PF	5%	630V
C222	1-136-272-00	FILM	68PF	5%	630V
C223	1-136-153-00	FILM	0.01uF	5%	50V
C224	1-136-165-00	FILM	0.1uF	5%	50V
C225	1-136-157-00	FILM	0.022uF	5%	50V
C301	1-124-443-00	ELECT	100uF	20%	10V
C302	1-124-443-00	ELECT	100uF	20%	10V
C303	1-124-907-11	ELECT	10uF	20%	50V
C304	1-124-907-11	ELECT	10uF	20%	50V
C305	1-124-478-11	ELECT	100uF	20%	25V
C306	1-124-925-11	ELECT	2.2uF	20%	100V
C307	1-124-902-00	ELECT	0.47uF	20%	50V
C308	1-162-215-31	CERAMIC	47PF	5%	50V
C309	1-161-494-00	CERAMIC	0.022uF		25V
C310	1-162-286-31	CERAMIC	220PF	10%	50V
C311	1-124-925-11	ELECT	2.2uF	20%	100V
C312	1-124-477-11	ELECT	47uF	20%	25V
C313	1-124-902-00	ELECT	0.47uF	20%	50V
C314	1-124-478-11	ELECT	100uF	20%	25V
C315	1-124-478-11	ELECT	100uF	20%	25V
C316	1-130-856-00	FILM	0.0068uF	5%	100V
C317	1-136-230-00	FILM	0.0022uF	5%	100V
C318	1-136-230-00	FILM	0.0022uF	5%	100V
C319	1-124-907-11	ELECT	10uF	20%	50V
C320	1-161-494-00	CERAMIC	0.022uF		25V
C321	1-136-558-11	FILM	0.0039uF	5%	630V
C322	1-107-585-11	CERAMIC	5PF	0.25PF	500V
C701	1-124-443-00	ELECT	100uF	20%	10V
C702	1-164-159-11	CERAMIC	0.1uF		50V
C703	1-164-159-11	CERAMIC	0.1uF		50V
C704	1-164-159-11	CERAMIC	0.1uF		50V
C705	1-124-443-00	ELECT	100uF	20%	10V
C706	1-124-925-11	ELECT	2.2uF	20%	100V
C707	1-164-159-11	CERAMIC	0.1uF		50V
C708	1-136-165-00	FILM	0.1uF	5%	50V

Ref. No.	Part No.	Description	Remark
C709	1-136-165-00	FILM 0.1uF 5%	50V
C720	1-164-159-11	CERAMIC 0.1uF	50V
C750	1-161-494-00	CERAMIC 0.022uF	25V
C751	1-161-494-00	CERAMIC 0.022uF	25V
C752	1-161-494-00	CERAMIC 0.022uF	25V
C753	1-161-494-00	CERAMIC 0.022uF	25V
C754	1-161-494-00	CERAMIC 0.022uF	25V
C801	1-124-907-11	ELECT 10uF 20%	50V
C802	1-136-594-11	FILM 0.018uF 5%	100V
C803	1-124-907-11	ELECT 10uF 20%	50V

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN701	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN702	1-568-834-11	SOCKET, CONNECTOR 15P	
* CNP301	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CNP302	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CNP303	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
CNP304	1-564-511-11	PLUG, CONNECTOR 8P	
* CNP305	1-564-518-11	PLUG, CONNECTOR 3P	
* CNP702	1-564-339-00	PIN, CONNECTOR 5P	
* CNP703	1-564-505-11	PLUG, CONNECTOR 2P	
* CNP707	1-564-342-11	PIN, CONNECTOR 8P	
* CNP708	1-564-336-61	PIN, CONNECTOR 2P	

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description	Remark
CP701	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
CP702	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
CP703	1-232-944-11	COMPOSITION CIRCUIT BLOCK	

< DIODE >

Ref. No.	Part No.	Description	Remark
D101	8-719-987-63	DIODE 1N4148M	
D201	8-719-987-63	DIODE 1N4148M	
D301	8-719-987-63	DIODE 1N4148M	
D302	8-719-987-63	DIODE 1N4148M	
D303	8-719-987-63	DIODE 1N4148M	
D304	8-719-933-50	DIODE HZS7C2L	
D305	8-719-987-63	DIODE 1N4148M	
D306	8-719-987-63	DIODE 1N4148M	
D307	8-719-987-63	DIODE 1N4148M	
D308	8-719-987-63	DIODE 1N4148M	
D309	8-719-987-63	DIODE 1N4148M	
D601	8-719-301-38	DIODE SEL2210S-C (AUTO REC LEVEL)	
D701	8-719-987-63	DIODE 1N4148M	
D702	8-719-987-63	DIODE 1N4148M	
D703	8-719-933-50	DIODE HZS7C2L	
D704	8-719-933-50	DIODE HZS7C2L	
D705	8-719-933-50	DIODE HZS7C2L	
D706	8-719-933-50	DIODE HZS7C2L	
D707	8-719-933-50	DIODE HZS7C2L	
D708	8-719-933-50	DIODE HZS7C2L	
D709	8-719-933-50	DIODE HZS7C2L	
D710	8-719-933-50	DIODE HZS7C2L	
D711	8-719-933-50	DIODE HZS7C2L	
D712	8-719-933-50	DIODE HZS7C2L	
D713	8-719-987-63	DIODE 1N4148M	
D714	8-719-987-63	DIODE 1N4148M	
D720	8-719-200-77	DIODE 10E2N	
D721	8-719-200-77	DIODE 10E2N	
D722	8-719-200-77	DIODE 10E2N	
D750	8-719-933-47	DIODE HZS7B2L	
D751	8-719-933-47	DIODE HZS7B2L	
D752	8-719-987-63	DIODE 1N4148M	
D753	8-719-987-63	DIODE 1N4148M	
D754	8-719-987-63	DIODE 1N4148M	
D801	8-719-109-89	DIODE RD5.6ESB2	
D802	8-719-200-77	DIODE 10E2N	
D803	8-719-200-77	DIODE 10E2N	
D804	8-719-200-77	DIODE 10E2N	
D805	8-719-200-77	DIODE 10E2N	

< IC >

Ref. No.	Part No.	Description	Remark
IC301	8-759-111-44	IC uPC4570C-1	
IC302	8-752-059-56	IC CXA1330S	
IC303	8-752-060-64	IC CXA1198AP	
IC304	8-759-145-58	IC uPC4558C	
IC305	8-759-145-58	IC uPC4558C	
IC306	8-759-106-56	IC uPC1297CA	
IC701	8-759-633-86	IC M50747-B83SP	
IC702	8-759-634-79	IC M50944-155SP	
IC703	8-759-973-95	IC BA6219B	
IC704	8-759-822-09	IC LB1641	
IC705	8-759-240-69	IC TC4069UBP	
IC706	8-759-822-09	IC LB1641	

< COIL >

Ref. No.	Part No.	Description	Remark
L101	1-410-780-11	INDUCTOR 27mH	
L201	1-410-780-11	INDUCTOR 27mH	
L301	1-408-080-00	INDUCTOR 100uH	
L801	1-410-761-11	INDUCTOR 0.68mH	
L802	1-410-521-11	INDUCTOR 100uH	
L803	1-410-521-11	INDUCTOR 100uH	

< FILTER >

Ref. No.	Part No.	Description	Remark
LPF101	1-236-087-11	FILTER, LOW PASS	
LPF201	1-236-087-11	FILTER, LOW PASS	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q101	8-729-900-89	TRANSISTOR DTC144ES	
Q102	8-729-900-74	TRANSISTOR DTC143TS	
Q103	8-729-821-31	TRANSISTOR 2SD1012-FG	

MAIN

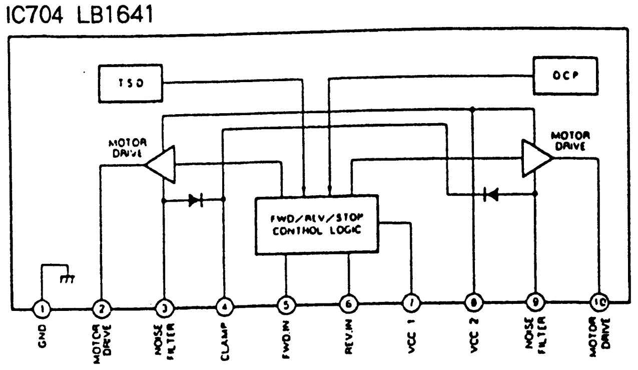
Ref. No.	Part No.	Description	Remark
Q201	8-729-900-89	TRANSISTOR DTC144ES	
Q202	8-729-900-74	TRANSISTOR DTC143TS	
Q203	8-729-821-31	TRANSISTOR 2SD1012-FG	
Q301	8-729-900-65	TRANSISTOR DTA144ES	
Q302	8-729-900-89	TRANSISTOR DTC144ES	
Q303	8-729-900-89	TRANSISTOR DTC144ES	
Q304	8-729-820-24	TRANSISTOR 2SC3330-T	
Q305	8-729-900-89	TRANSISTOR DTC144ES	
Q306	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q307	8-729-900-65	TRANSISTOR DTA144ES	
Q308	8-729-900-65	TRANSISTOR DTA144ES	
Q309	8-729-900-89	TRANSISTOR DTC144ES	
Q310	8-729-900-65	TRANSISTOR DTA144ES	
Q311	8-729-900-61	TRANSISTOR DTA114ES	
Q312	8-729-900-80	TRANSISTOR DTC114ES	
Q313	8-729-900-80	TRANSISTOR DTC114ES	
Q314	8-729-900-80	TRANSISTOR DTC114ES	
Q315	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q316	8-729-194-57	TRANSISTOR 2SC945-P	
Q317	8-729-194-57	TRANSISTOR 2SC945-P	
Q318	8-729-900-65	TRANSISTOR DTA144ES	
Q701	8-729-900-80	TRANSISTOR DTC114ES	
Q702	8-729-900-80	TRANSISTOR DTC114ES	
Q703	8-729-900-80	TRANSISTOR DTC114ES	
Q704	8-729-820-24	TRANSISTOR 2SC3330-T	
Q705	8-729-820-24	TRANSISTOR 2SC3330-T	
Q706	8-729-900-89	TRANSISTOR DTC144ES	
Q707	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q708	8-729-900-61	TRANSISTOR DTA114ES	
Q709	8-729-900-61	TRANSISTOR DTA114ES	
Q712	8-729-900-65	TRANSISTOR DTA144ES	
Q713	8-729-900-65	TRANSISTOR DTA144ES	
Q715	8-729-900-80	TRANSISTOR DTC114ES	
Q720	8-729-900-80	TRANSISTOR DTC114ES	
Q721	8-729-801-84	TRANSISTOR 2SB1013-4	
Q801	8-729-140-96	TRANSISTOR 2SD774-34	
Q802	8-729-140-96	TRANSISTOR 2SD774-34	
		< RESISTOR >	
R101	1-249-435-11	CARBON 33K 5% 1/4W	
R102	1-249-403-11	CARBON 68 5% 1/4W	F
R103	1-247-882-11	CARBON 130K 5% 1/4W	
R104	1-249-426-11	CARBON 5.6K 5% 1/4W	
R105	1-249-420-11	CARBON 1.8K 5% 1/4W	F
R107	1-247-887-00	CARBON 220K 5% 1/4W	
R108	1-247-840-00	CARBON 2.4K 5% 1/4W	
R110	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R111	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R112	1-247-864-11	CARBON 24K 5% 1/4W	
R113	1-249-414-11	CARBON 560 5% 1/4W	F

Ref. No.	Part No.	Description	Remark
R115	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R116	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R117	1-249-417-11	CARBON 1K 5% 1/4W	F
R118	1-249-429-11	CARBON 10K 5% 1/4W	
R119	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R120	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R121	1-249-429-11	CARBON 10K 5% 1/4W	
R122	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R124	1-249-429-11	CARBON 10K 5% 1/4W	
R125	1-249-437-11	CARBON 47K 5% 1/4W	
R126	1-249-431-11	CARBON 15K 5% 1/4W	
R127	1-249-409-11	CARBON 220 5% 1/4W	F
R128	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R129	1-247-883-00	CARBON 150K 5% 1/4W	
R130	1-249-393-11	CARBON 10 5% 1/4W	F
R131	1-249-432-11	CARBON 18K 5% 1/4W	
R132	1-249-429-11	CARBON 10K 5% 1/4W	
R201	1-249-435-11	CARBON 33K 5% 1/4W	
R202	1-249-403-11	CARBON 68 5% 1/4W	F
R203	1-247-882-11	CARBON 130K 5% 1/4W	
R204	1-249-426-11	CARBON 5.6K 5% 1/4W	
R205	1-249-420-11	CARBON 1.8K 5% 1/4W	F
R207	1-247-887-00	CARBON 220K 5% 1/4W	
R208	1-247-840-00	CARBON 2.4K 5% 1/4W	
R210	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R211	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R212	1-247-864-11	CARBON 24K 5% 1/4W	
R213	1-249-414-11	CARBON 560 5% 1/4W	F
R215	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R216	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R217	1-249-417-11	CARBON 1K 5% 1/4W	F
R218	1-249-429-11	CARBON 10K 5% 1/4W	
R219	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R220	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R221	1-249-429-11	CARBON 10K 5% 1/4W	
R222	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R224	1-249-429-11	CARBON 10K 5% 1/4W	
R225	1-249-437-11	CARBON 47K 5% 1/4W	
R226	1-249-431-11	CARBON 15K 5% 1/4W	
R227	1-249-409-11	CARBON 220 5% 1/4W	F
R228	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R229	1-247-883-00	CARBON 150K 5% 1/4W	
R230	1-249-393-11	CARBON 10 5% 1/4W	F
R231	1-249-432-11	CARBON 18K 5% 1/4W	
R232	1-249-429-11	CARBON 10K 5% 1/4W	
R301	1-249-409-11	CARBON 220 5% 1/4W	F
R302	1-249-409-11	CARBON 220 5% 1/4W	F
R303	1-249-433-11	CARBON 22K 5% 1/4W	
R304	1-249-435-11	CARBON 33K 5% 1/4W	
R305	1-249-436-11	CARBON 39K 5% 1/4W	

Continued on page 15.

• IC BLOCK DIAGRAM

IC703,706 BA6219B
IC704 LB1641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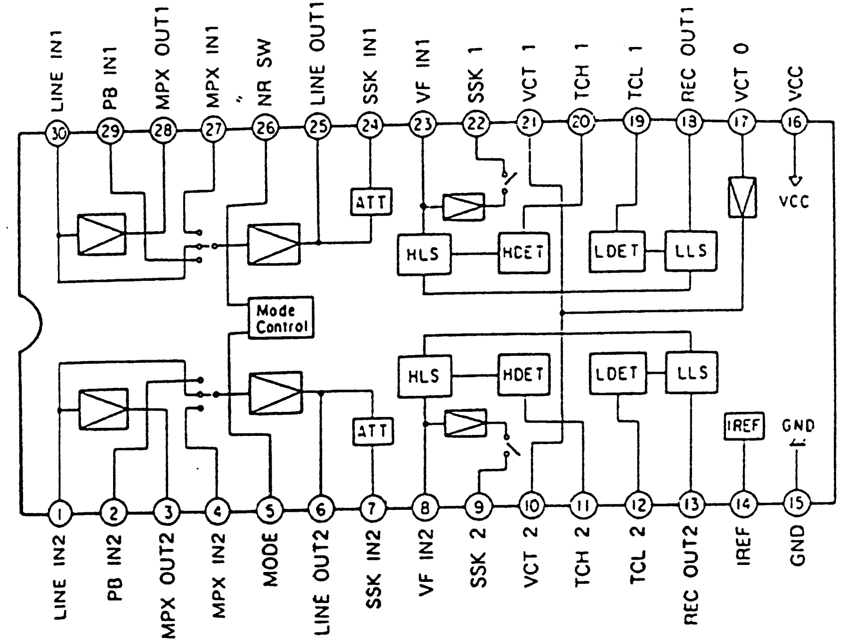
OCP
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTROL LOGIC
① GND
② MOTOR DRIVE
③ NOISE FILTER
④ CLAMP
⑤ FWD IN
⑥ REV IN
⑦ VCC 1
⑧ VCC 2
⑨ NOISE FILTER
⑩ MOTOR DRIVE

IC302 CXA1330S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PB IN1
MPX OUT1
MPX IN1
NR SW
LINE OUT1
SSK IN1
VF IN1
SSK 1
VCT 1
TCH 1
TCL 1
REC OUT1
VCT 0
VCC
ATT
HLS
HDET
LDET
LLS
Mode Control
IREF
GND
LINE IN2
PB IN2
MPX OUT2
MPX IN2
MODE
LINE OUT2
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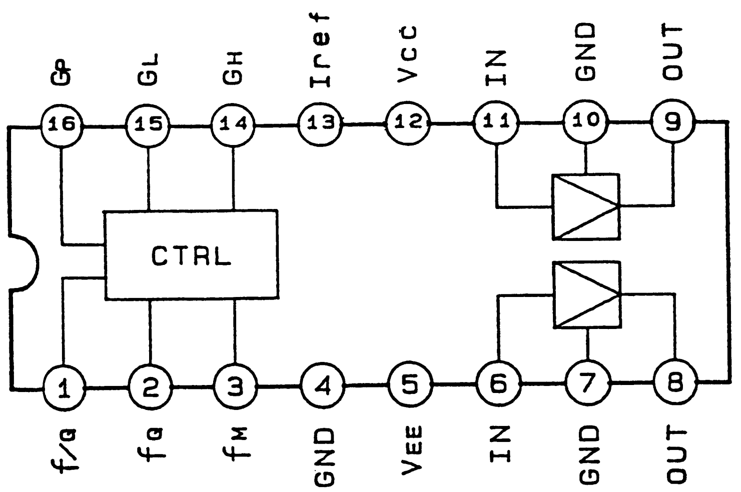
VF IN2
SSK 2
VCT 2
TCH 2
TCL 2
REC OUT2
IREF
GND

IC303 CXA1198AP


Gp
GL
GH
Iref
Vcc
IN
GND
OUT
CTRL
f/Q
fQ
fM
GND
VEE
IN
GND
OUT

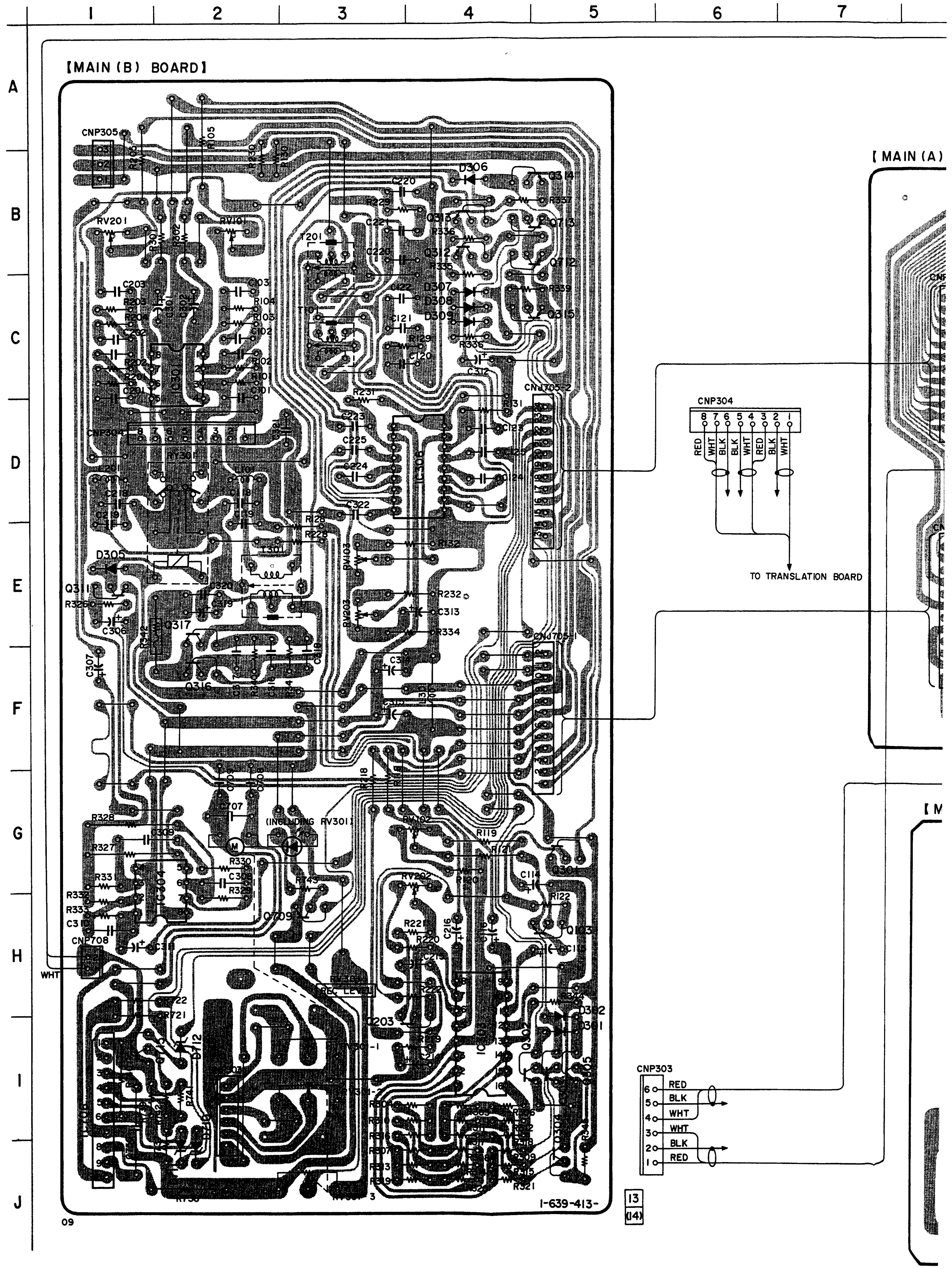
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C-12	Q301	G-5
D201	C-13	Q302	I-5
D301	I-5	Q303	I-5
D302	I-5	Q304	J-5
D303	E-11	Q305	I-5
D304	E-11	Q306	D-11
D305	E-1	Q307	E-11
D306	B-4	Q308	F-11
D307	C-4	Q309	E-11
D308	C-4	Q310	E-11
D309	C-4	Q311	E-1
D601	A-20	Q312	B-4
D701	C-17	Q313	B-4
D702	C-17	Q314	B-5
D703	E-12	Q315	C-5
D704	E-12	Q316	F-2
D705	F-12	Q317	E-2
D706	F-12	Q318	F-11
D707	E-14	Q701	F-13
D708	E-14	Q702	F-13
D709	E-13	Q703	E-13
D710	J-2	Q704	D-17
D711	J-2	Q705	C-17
D712	I-2	Q706	C-15
D713	C-15	Q707	C-17
D714	C-17	Q708	B-19
D720	C-10	Q709	H-3
D721	C-11	Q712	B-5
D722	C-12	Q713	B-5
D750	B-13	Q715	I-1
D751	D-14	Q720	I-8
D752	B-19	Q721	J-8
D753	A-19	Q801	B-13
D754	I-8	Q802	B-11
D801	D-16		
D802	C-15		
D803	C-15		
D804	C-14		
D805	C-14		
IC301	C-2		
IC302	E-9		
IC303	I-4		
IC304	H-2		
IC305	D-13		
IC306	D-4		
IC701	E-16		
IC702	B-15		
IC703	E-13		
IC704	D-13		
IC705	D-15		
IC706	I-1		
IC1001	H-18		
IC1002	H-19		
Q101	D-10		
Q102	D-11		
Q103	H-5		
Q201	F-10		
Q202	D-11		
Q203	I-4		

Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ▪ : parts mounted on the couductor side.

PRINTED WIRING BOADS — MAIN SECTION —


1
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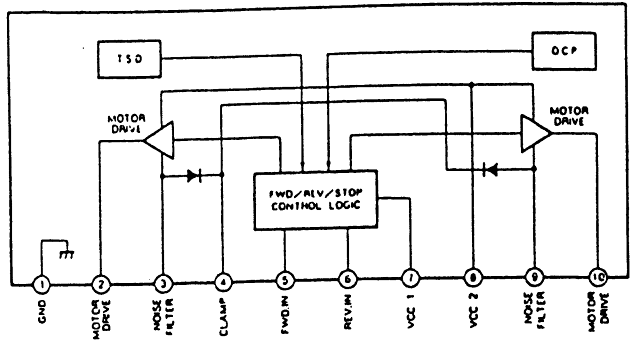
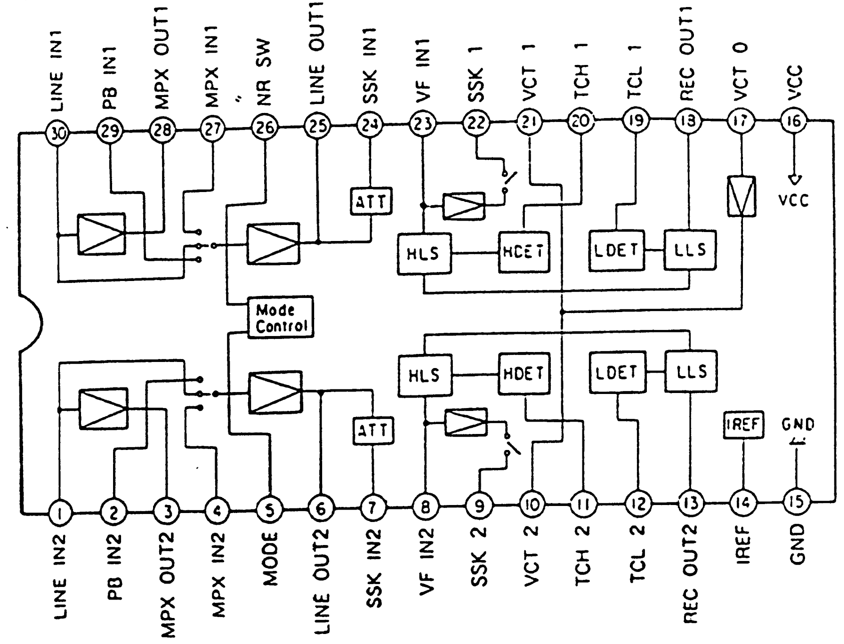
A
B
C
D
E
F
G
H
I
J
[MAIN (B) BOARD]
[MAIN (A)
CNP305
RV201
RV101
T201
T101
IC301
IC306
IC304
D305
Q311
Q316
Q317
CNP708
CN705
CNP304
8 7 6 5 4 3 2 1
RED WHT BLK BLK WHT RED BLK WHT
TO TRANSLATION BOARD
CNP303
RED
BLK
WHT
WHT
BLK
RED
(INCLUDING RV301)
1-639-413-
09
13
14

• IC BLOCK DIAGRAM

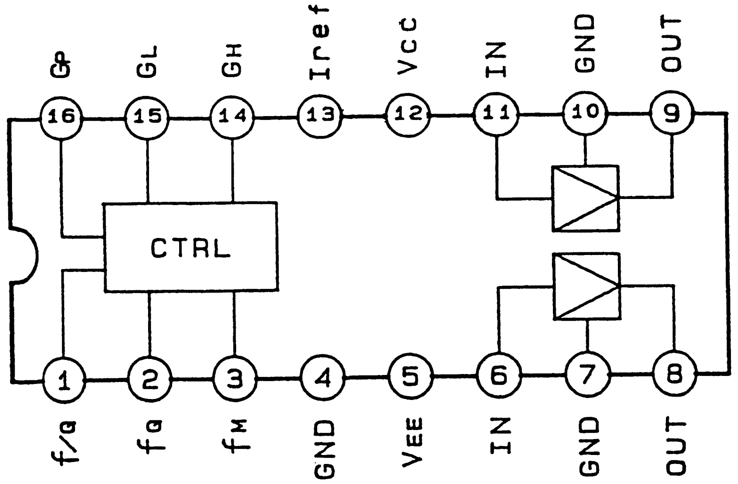
IC703,706 BA6219B
IC704 LB1641


TSD
OCP
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTROL LOGIC
1 GND
2 MOTOR DRIVE
3 NOISE FILTER
4 CLAMP
5 FWD IN
6 REV IN
7 VCC 1
8 VCC 2
9 NOISE FILTER
10 MOTOR DRIVE

IC302 CXA1330S


30 LINE IN1
29 PB IN1
28 MPX OUT1
27 MPX IN1
26 NR SW
25 LINE OUT1
24 SSK IN1
23 VF IN1
22 SSK 1
21 VCT 1
20 TCH 1
19 TCL 1
18 REC OUT1
17 VCT 0
16 VCC
VCC
ATT
HLS
HDET
LDET
LLS
Mode Control
ATT
HLS
HDET
LDET
LLS
IREF
GND
1 LINE IN2
2 PB IN2
3 MPX OUT2
4 MPX IN2
5 MODE
6 LINE OUT2
7 SSK IN2
8 VF IN2
9 SSK 2
10 VCT 2
11 TCH 2
12 TCL 2
13 REC OUT2
14 IREF
15 GND

IC303 CXA1198AP


16 Gp
15 GL
14 GH
13 Iref
12 Vcc
11 IN
10 GND
9 OUT
CTRL
1 f/Q
2 fQ
3 fM
4 GND
5 VEE
6 IN
7 GND
8 OUT

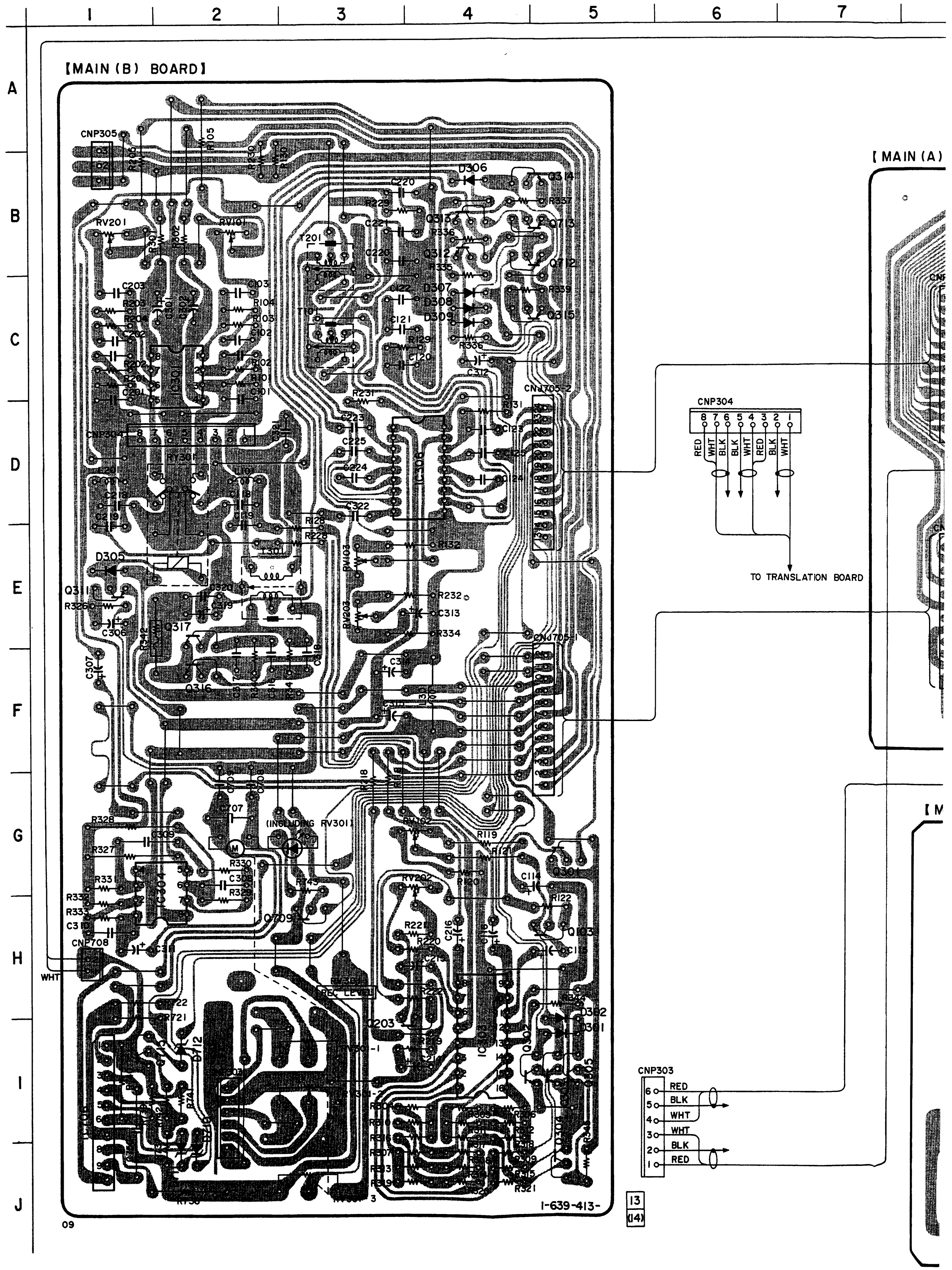
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C-12	Q301	G-5
D201	C-13	Q302	I-5
D301	I-5	Q303	I-5
D302	I-5	Q304	J-5
D303	E-11	Q305	I-5
D304	E-11	Q306	D-11
D305	E-1	Q307	E-11
D306	B-4	Q308	F-11
D307	C-4	Q309	E-11
D308	C-4	Q310	E-11
D309	C-4	Q311	E-1
D601	A-20	Q312	B-4
D701	C-17	Q313	B-4
D702	C-17	Q314	B-5
D703	E-12	Q315	C-5
D704	E-12	Q316	F-2
D705	F-12	Q317	E-2
D706	F-12	Q318	F-11
D707	E-14	Q701	F-13
D708	E-14	Q702	F-13
D709	E-13	Q703	E-13
D710	J-2	Q704	D-17
D711	J-2	Q705	C-17
D712	I-2	Q706	C-15
D713	C-15	Q707	C-17
D714	C-17	Q708	B-19
D720	C-10	Q709	H-3
D721	C-11	Q712	B-5
D722	C-12	Q713	B-5
D750	B-13	Q715	I-1
D751	D-14	Q720	I-8
D752	B-19	Q721	J-8
D753	A-19	Q801	B-13
D754	I-8	Q802	B-11
D801	D-16		
D802	C-15		
D803	C-15		
D804	C-14		
D805	C-14		
IC301	C-2		
IC302	E-9		
IC303	I-4		
IC304	H-2		
IC305	D-13		
IC306	D-4		
IC701	E-16		
IC702	B-15		
IC703	E-13		
IC704	D-13		
IC705	D-15		
IC706	I-1		
IC1001	H-18		
IC1002	H-19		
Q101	D-10		
Q102	D-11		
Q103	H-5		
Q201	F-10		
Q202	D-11		
Q203	I-4		

Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the couductor side.

PRINTED WIRING BOADS — MAIN SECTION —


1
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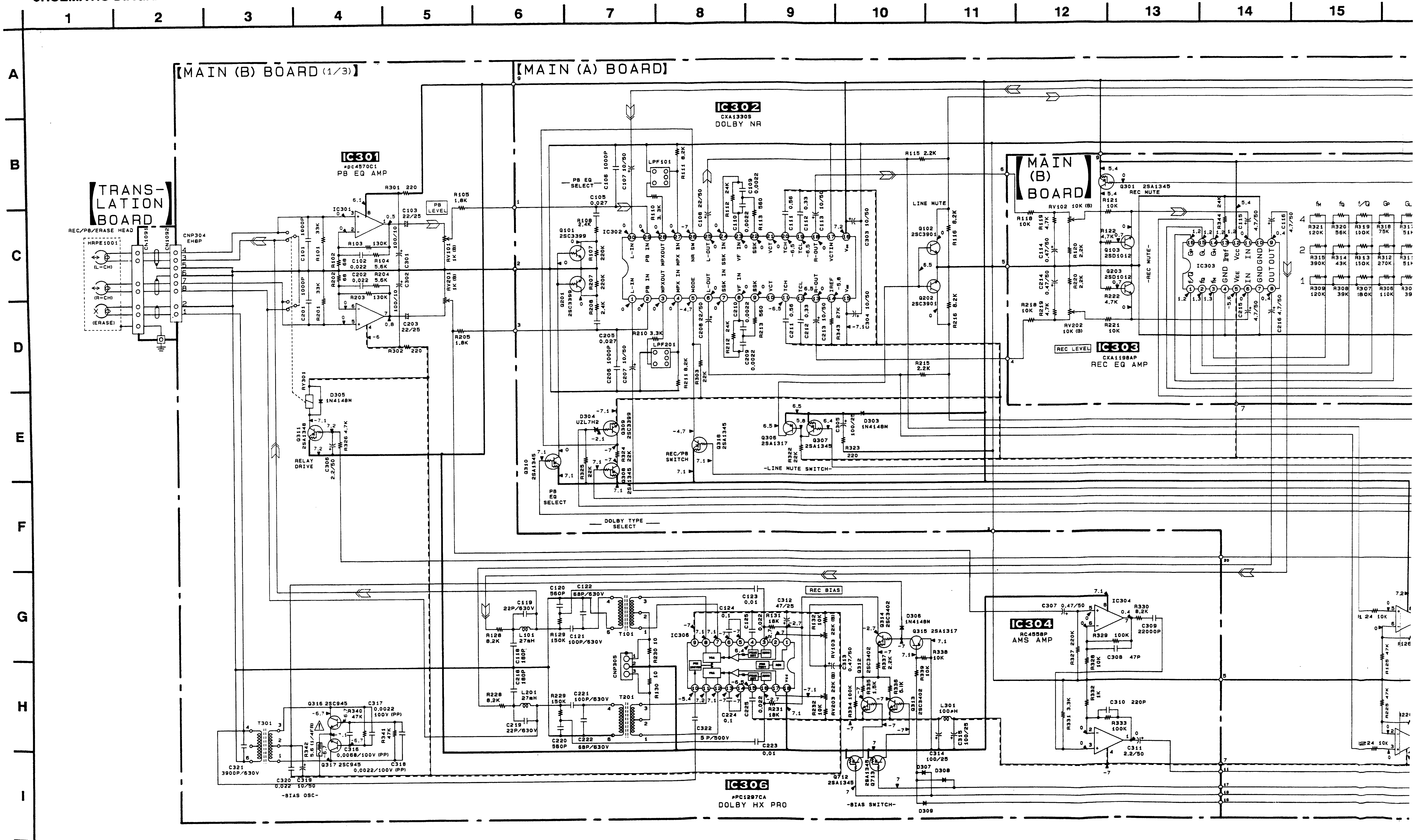
I
J
[MAIN (B) BOARD]
[MAIN (A)
CNP305
RV201
RV101
T201
T101
D306
D307
D308
D309
D305
Q311
Q317
Q316
IC306
CNJ705-2
CNJ705-1
CNP304
8 7 6 5 4 3 2 1
RED WHT BLK BLK WHT RED BLK WHT
TO TRANSLATION BOARD
(INCLUDING RV301)
RV202
CNP708
WHT
Q203
D712
D721
CNP303
6 RED
5 BLK
4 WHT
3 WHT
2 BLK
1 RED
1-639-413-
13
(14)
09

SHCEMATIC DIAGRAM — MAIN SECTION —


1
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12
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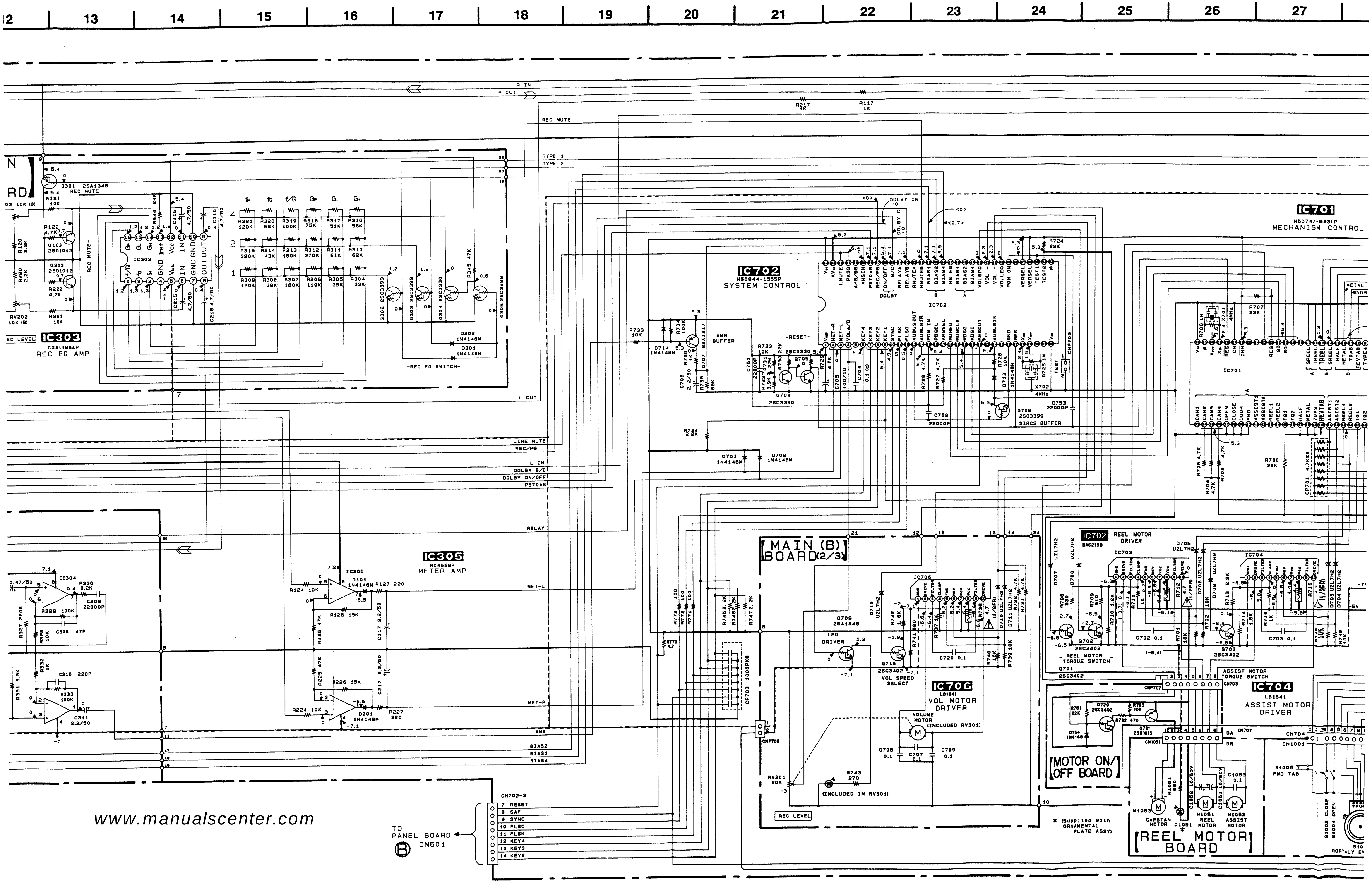
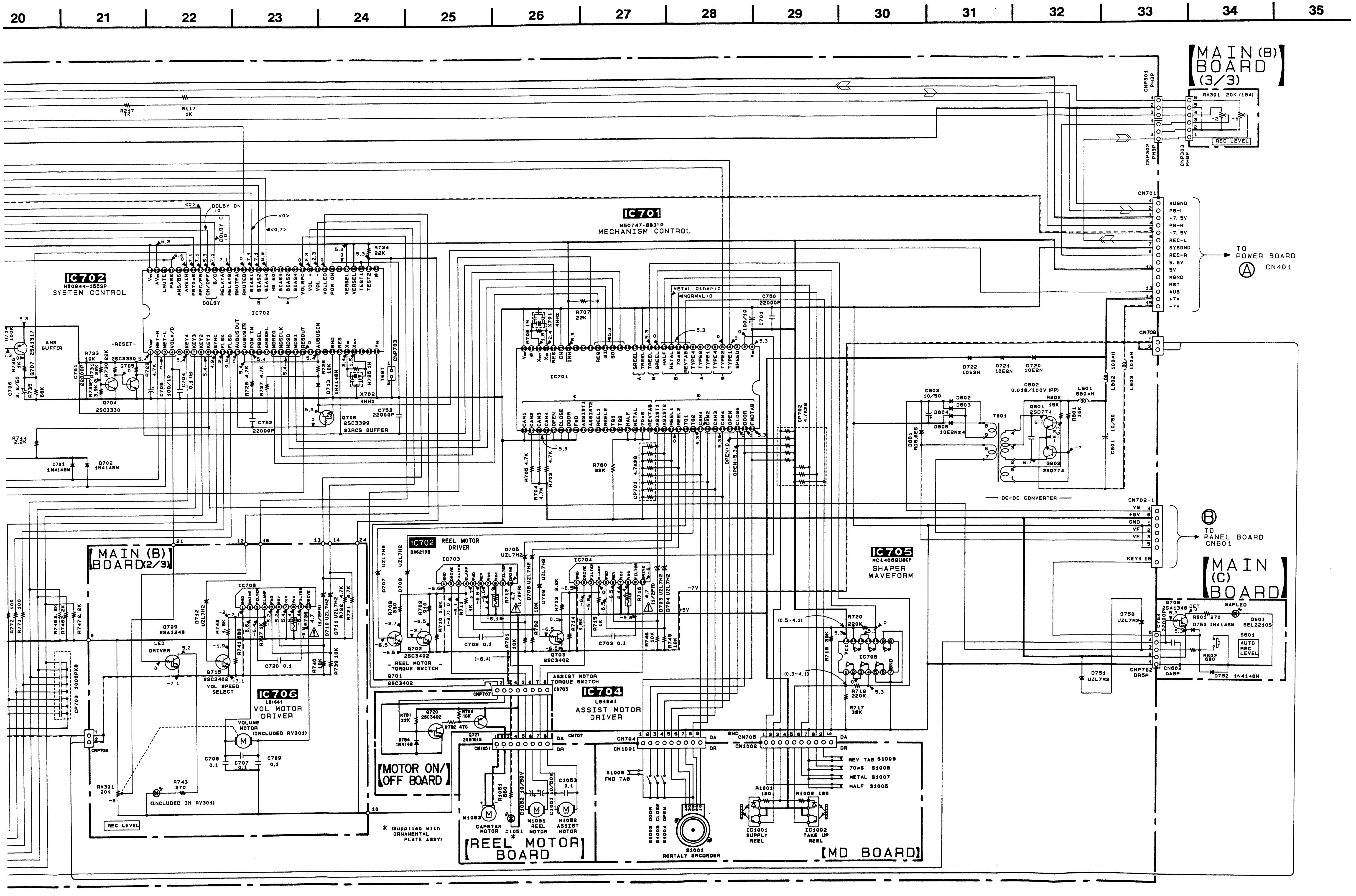
14
15
A
B
C
D
E
F
G
H
I
J
MAIN (B) BOARD (1/3)
MAIN (A) BOARD
TRANS-LATION BOARD
REC/PB/ERASE HEAD
HRPE1001
(L-CH)
(R-CH)
(ERASE)
CN1091
CN1092
CNP304 EHBP
IC301 μPC4570C1 PB EQ AMP
IC302 CXA1330S DOLBY NR
IC303 CXA1198AP REC EQ AMP
IC304 RC4558P AMS AMP
IC306 μPC1297CA DOLBY HX PRO
MAIN (B) BOARD
PB LEVEL
PB EQ SELECT
LINE MUTE
REC LEVEL
REC MUTE
-REC MUTE-
RELAY DRIVE
REC/PB SWITCH
-LINE MUTE SWITCH-
DOLBY TYPE SELECT
REC BIAS
-BIAS OSC-
-BIAS SWITCH-
LPF101
LPF201
T101
T201
T301
L101 27mH
L201 27mH
L301 100μH
CNP305
RY301
D304 UZL7H2
D305 1N4148M
D303 1N4148M
D306 1N4148M
D307
D308
D309
Q101 2SC3399
Q201 2SC3399
Q102 2SC3901
Q202 2SC3901
Q103 2SD1012
Q203 2SD1012
Q301 2SA1345
Q305 2SA1317
Q306 2SA1345
Q307 2SA1345
Q309 2SC3399
Q310 2SA1345
Q311 2SA1348
Q312 2SA1345
Q313 2SC3402
Q314 2SC3402
Q315 2SA1317
Q316 2SC945
Q317 2SC945
Q318 2SA1345
RV101 1K (B)
RV201 1K (B)
RV102 10K (B)
RV202 10K (B)
RV103 22K (B)
RV203 22K (B)
R301 220
R302 220
R105 1.8K
R205 1.8K
R115 2.2K
R215 2.2K
R323 220
C309 22000P
C321 3900P/630V
fн
fα
f/Q
Gp
GL

Note on Schematic Diagram:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ▭ : fusible resistor.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.


12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
R IN
R OUT
R217 1K
R117 1K
REC MUTE
TYPE 1
TYPE 2
Q301 2SA1345 REC MUTE
IC303
CXA1198AP
REC EQ AMP
REC LEVEL
-REC MUTE-
fH
fB
f/Q
GP
GL
GH
Q302 2SC3399
Q303 2SC3399
Q304 2SC3330
Q305 2SC3399
D302 1N4148M
D301 1N4148M
-REC EQ SWITCH-
IC702
M50944-155SP
SYSTEM CONTROL
AMS BUFFER
-RESET-
DOLBY ON
DOLBY
Q704 2SC3330
Q706 2SC3399
SIRCS BUFFER
X702 4MHz
IC701
M50747-B831P
MECHANISM CONTROL
X701 4MHz
L OUT
LINE MUTE
REC/PB
L IN
DOLBY B/C
DOLBY ON/OFF
PB70#S
RELAY
D701 1N4148M
D702 1N4148M
IC305
RC4558P
METER AMP
IC304
D101 1N4148M
D201 1N4148M
MET-L
MET-R
AMS
BIAS2
BIAS1
BIAS4
CNP708
CP703 1000PX8
MAIN (B) BOARD (2/3)
IC702
BA6219B
REEL MOTOR DRIVER
IC703
IC704
IC706
LB1641
VOL MOTOR DRIVER
Q709 2SA1348
LED DRIVER
Q715 2SC3402
VOL SPEED SELECT
VOLUME MOTOR (INCLUDED RV301)
RV301 20K
(INCLUDED IN RV301)
REC LEVEL
Q702 2SC3402
-REEL MOTOR TORQUE SWITCH
Q701 2SC3402
Q703 2SC3402
ASSIST MOTOR TORQUE SWITCH
IC704
LB1641
ASSIST MOTOR DRIVER
CNP707
CN703
CN707
CN1051
CN704
CN1001
Q720 2SC3402
Q721 2SB1013
D754 1N4148
MOTOR ON/OFF BOARD
M1053 CAPSTAN MOTOR
D1051
M1051 REEL MOTOR
M1052 ASSIST MOTOR
* (Supplied with ORNAMENTAL PLATE ASSY)
REEL MOTOR BOARD
S1005 FWD TAB
S1003 CLOSE
S1004 OPEN
CN702-2
7 RESET
8 SAF
9 SYNC
10 FLSO
11 FLSK
12 KEY4
13 KEY3
14 KEY2
TO PANEL BOARD
B
CN601


MAIN (B) BOARD (3/3)
RV301 20K (15A)
REC LEVEL
CN301 PH3P
CN302 PH3P
CN303 PH6P
IC701
M50747-8831P
MECHANISM CONTROL
IC702
M50944-155SP
SYSTEM CONTROL
AMS BUFFER
-RESET-
DOLBY ON
2SC3330
Q706 2SC3399
SIRCS BUFFER
4MHz
TEST
CN701
AUGND
PB-L
+7.5V
PB-R
-7.5V
REC-L
SYSGND
REC-R
5.6V
5V
MGND
RST
AUB
+7V
-7V
TO POWER BOARD
Ⓐ CN401
CN708
DC-DC CONVERTER
T801
Q801 2SD774
Q802 2SD774
CN702-1
VG
+5V
GND
VF
KEY1
Ⓑ TO PANEL BOARD CN601
MAIN (C) BOARD
Q708 2SA1348
SAFLED
D601 SEL2210S
S601 AUTO REC LEVEL
D753 1N4148M
D752 1N4148M
D750 UZL7M2
D751 UZL7M2
CNP702 DR5P
CN602 DA5P
MAIN (B) BOARD (2/3)
IC706
LB1641
VOL MOTOR DRIVER
IC702 REEL MOTOR DRIVER
BA6219B
IC703
IC704
IC705
MC14069UBCP
SHAPER WAVEFORM
Q709 2SA1348
LED DRIVER
Q715 2SC3402
VOL SPEED SELECT
Q702 2SC3402
Q703 2SC3402
REEL MOTOR TORQUE SWITCH
Q701 2SC3402
ASSIST MOTOR TORQUE SWITCH
IC704
LB1641
ASSIST MOTOR DRIVER
VOLUME MOTOR (INCLUDED RV301)
RV301 20K
(INCLUDED IN RV301)
REC LEVEL
CNP706
MOTOR ON/OFF BOARD
Q720 2SC3402
Q721 2SB1013
CN707
CN1051
M1053 CAPSTAN MOTOR
M1051 REEL MOTOR
M1052 ASSIST MOTOR
D1051
REEL MOTOR BOARD
* (Supplied with ORNAMENTAL PLATE ASSY)
CN704
CN1001
CN705
CN1002
S1005 FWD TAB
S1002 DOOR
S1003 CLOSE
S1004 OPEN
S1001 RORTALY ENCORDER
IC1001 SUPPLY REEL
IC1002 TAKE UP REEL
REV TAB S1009
70μS S1008
METAL S1007
HALF S1006
MD BOARD

Continued from page 4.

Ref. No.	Part No.	Description				Remark
R306	1-247-880-11	CARBON	110K	5%	1/4W	
R307	1-247-885-00	CARBON	180K	5%	1/4W	
R308	1-249-436-11	CARBON	39K	5%	1/4W	
R309	1-247-881-00	CARBON	120K	5%	1/4W	
R310	1-247-874-11	CARBON	62K	5%	1/4W	
R311	1-247-872-11	CARBON	51K	5%	1/4W	
R312	1-247-889-00	CARBON	270K	5%	1/4W	
R313	1-247-883-00	CARBON	150K	5%	1/4W	
R314	1-247-870-11	CARBON	43K	5%	1/4W	
R315	1-247-893-11	CARBON	390K	5%	1/4W	
R316	1-249-438-11	CARBON	56K	5%	1/4W	
R317	1-247-872-11	CARBON	51K	5%	1/4W	
R318	1-247-876-11	CARBON	75K	5%	1/4W	
R319	1-249-441-11	CARBON	100K	5%	1/4W	
R320	1-249-438-11	CARBON	56K	5%	1/4W	
R321	1-247-881-00	CARBON	120K	5%	1/4W	
R322	1-249-433-11	CARBON	22K	5%	1/4W	
R323	1-249-409-11	CARBON	220	5%	1/4W	F
R324	1-249-433-11	CARBON	22K	5%	1/4W	
R325	1-249-433-11	CARBON	22K	5%	1/4W	
R326	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R327	1-247-887-00	CARBON	220K	5%	1/4W	
R328	1-249-429-11	CARBON	10K	5%	1/4W	
R329	1-249-441-11	CARBON	100K	5%	1/4W	
R330	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R331	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R332	1-249-417-11	CARBON	1K	5%	1/4W	F
R333	1-249-441-11	CARBON	100K	5%	1/4W	
R334	1-249-441-11	CARBON	100K	5%	1/4W	
R335	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R336	1-247-848-11	CARBON	5.1K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R338	1-249-429-11	CARBON	10K	5%	1/4W	
R339	1-249-429-11	CARBON	10K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R342	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R343	1-215-455-00	METAL	27K	1%	1/6W	
R344	1-247-864-11	CARBON	24K	5%	1/4W	
R345	1-249-437-11	CARBON	47K	5%	1/4W	
R601	1-249-410-11	CARBON	270	5%	1/4W	F
R602	1-249-415-11	CARBON	680	5%	1/4W	F
R701	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R703	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R704	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R706	1-247-903-00	CARBON	1M	5%	1/4W	
R707	1-249-433-11	CARBON	22K	5%	1/4W	
R708	1-249-411-11	CARBON	330	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R709	1-247-830-11	CARBON	910	5%	1/4W	
R710	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R711	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R712	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R713	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R714	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R715	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R716	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R717	1-249-436-11	CARBON	39K	5%	1/4W	
R718	1-249-436-11	CARBON	39K	5%	1/4W	
R719	1-247-887-00	CARBON	220K	5%	1/4W	
R720	1-247-887-00	CARBON	220K	5%	1/4W	
R721	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R722	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R724	1-249-433-11	CARBON	22K	5%	1/4W	
R725	1-247-903-00	CARBON	1M	5%	1/4W	
R726	1-249-429-11	CARBON	10K	5%	1/4W	
R727	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R728	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R729	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R730	1-249-433-11	CARBON	22K	5%	1/4W	
R731	1-249-433-11	CARBON	22K	5%	1/4W	
R732	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-441-11	CARBON	100K	5%	1/4W	
R735	1-249-439-11	CARBON	68K	5%	1/4W	
R736	1-249-417-11	CARBON	1K	5%	1/4W	F
R737	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R738	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R739	1-249-429-11	CARBON	10K	5%	1/4W	
R740	1-249-429-11	CARBON	10K	5%	1/4W	
R741	1-249-415-11	CARBON	680	5%	1/4W	F
R742	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R743	1-249-410-11	CARBON	270	5%	1/4W	F
R744	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R745	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R747	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R748	1-249-429-11	CARBON	10K	5%	1/4W	
R749	1-249-429-11	CARBON	10K	5%	1/4W	
R770	1-249-389-11	CARBON	4.7	5%	1/4W	F
R771	1-247-807-31	CARBON	100	5%	1/4W	
R772	1-247-807-31	CARBON	100	5%	1/4W	
R773	1-247-807-31	CARBON	100	5%	1/4W	
R780	1-249-433-11	CARBON	22K	5%	1/4W	
R781	1-249-433-11	CARBON	22K	5%	1/4W	
R782	1-249-413-11	CARBON	470	5%	1/4W	F
R783	1-249-429-11	CARBON	10K	5%	1/4W	
R801	1-249-431-11	CARBON	15K	5%	1/4W	
R802	1-249-431-11	CARBON	15K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description				Remark
		< VARIABLE RESISTOR >				
RV101	1-238-597-11	RES, ADJ, CARBON 1K				
RV102	1-238-600-11	RES, ADJ, CARBON 10K				
RV103	1-238-601-11	RES, ADJ, CARBON 22K				
RV201	1-238-597-11	RES, ADJ, CARBON 1K				
RV202	1-238-600-11	RES, ADJ, CARBON 10K				
RV203	1-238-601-11	RES, ADJ, CARBON 22K				
RV301	1-241-232-11	RES, VAR, CARBON 20K/20K/20K (REC LEVEL)				
		< RELAY >				
RY301	1-515-726-11	RELAY				
		< SWITCH >				
S601	1-554-303-21	SWITCH, TACTILE (AUTO REC LEVEL)				
S605	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)				
		< TRANSFORMER >				
T101	1-433-335-11	TRANSFORMER, BIAS OSCILLATION				
T201	1-433-335-11	TRANSFORMER, BIAS OSCILLATION				
T301	1-433-336-11	TRANSFORMER, BIAS OSCILLATION				
T801	1-450-673-11	TRANSFORMER, DC-DC CONVERTER				
		< VIBRATOR >				
X701	1-577-358-21	VIBRATOR, CERAMIC (4MHz)				
X702	1-577-358-21	VIBRATOR, CERAMIC (4MHz)				

****

*	1-632-741-11	REEL MOTOR BOARD ****************				
		< CAPACITOR >				
C1051	1-124-907-11	ELECT	10uF	20%	50V	
C1052	1-124-907-11	ELECT	10uF	20%	50V	
C1053	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN1051	1-564-501-11	PIN, CONNECTOR 8P				
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
		< RESISTOR >				
R1051	1-247-825-31	CARBON	560	5%	1/4W	

****

Continued from page 4.

Ref. No.	Part No.	Description				Remark
R306	1-247-880-11	CARBON	110K	5%	1/4W	
R307	1-247-885-00	CARBON	180K	5%	1/4W	
R308	1-249-436-11	CARBON	39K	5%	1/4W	
R309	1-247-881-00	CARBON	120K	5%	1/4W	
R310	1-247-874-11	CARBON	62K	5%	1/4W	
R311	1-247-872-11	CARBON	51K	5%	1/4W	
R312	1-247-889-00	CARBON	270K	5%	1/4W	
R313	1-247-883-00	CARBON	150K	5%	1/4W	
R314	1-247-870-11	CARBON	43K	5%	1/4W	
R315	1-247-893-11	CARBON	390K	5%	1/4W	
R316	1-249-438-11	CARBON	56K	5%	1/4W	
R317	1-247-872-11	CARBON	51K	5%	1/4W	
R318	1-247-876-11	CARBON	75K	5%	1/4W	
R319	1-249-441-11	CARBON	100K	5%	1/4W	
R320	1-249-438-11	CARBON	56K	5%	1/4W	
R321	1-247-881-00	CARBON	120K	5%	1/4W	
R322	1-249-433-11	CARBON	22K	5%	1/4W	
R323	1-249-409-11	CARBON	220	5%	1/4W	F
R324	1-249-433-11	CARBON	22K	5%	1/4W	
R325	1-249-433-11	CARBON	22K	5%	1/4W	
R326	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R327	1-247-887-00	CARBON	220K	5%	1/4W	
R328	1-249-429-11	CARBON	10K	5%	1/4W	
R329	1-249-441-11	CARBON	100K	5%	1/4W	
R330	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R331	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R332	1-249-417-11	CARBON	1K	5%	1/4W	F
R333	1-249-441-11	CARBON	100K	5%	1/4W	
R334	1-249-441-11	CARBON	100K	5%	1/4W	
R335	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R336	1-247-848-11	CARBON	5.1K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R338	1-249-429-11	CARBON	10K	5%	1/4W	
R339	1-249-429-11	CARBON	10K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R342	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R343	1-215-455-00	METAL	27K	1%	1/6W	
R344	1-247-864-11	CARBON	24K	5%	1/4W	
R345	1-249-437-11	CARBON	47K	5%	1/4W	
R601	1-249-410-11	CARBON	270	5%	1/4W	F
R602	1-249-415-11	CARBON	680	5%	1/4W	F
R701	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R703	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R704	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R706	1-247-903-00	CARBON	1M	5%	1/4W	
R707	1-249-433-11	CARBON	22K	5%	1/4W	
R708	1-249-411-11	CARBON	330	5%	1/4W	
R709	1-247-830-11	CARBON	910	5%	1/4W	
R710	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R711	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R712	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R713	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R714	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R715	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R716	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R717	1-249-436-11	CARBON	39K	5%	1/4W	
R718	1-249-436-11	CARBON	39K	5%	1/4W	
R719	1-247-887-00	CARBON	220K	5%	1/4W	
R720	1-247-887-00	CARBON	220K	5%	1/4W	
R721	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R722	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R724	1-249-433-11	CARBON	22K	5%	1/4W	
R725	1-247-903-00	CARBON	1M	5%	1/4W	
R726	1-249-429-11	CARBON	10K	5%	1/4W	
R727	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R728	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R729	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R730	1-249-433-11	CARBON	22K	5%	1/4W	
R731	1-249-433-11	CARBON	22K	5%	1/4W	
R732	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-441-11	CARBON	100K	5%	1/4W	
R735	1-249-439-11	CARBON	68K	5%	1/4W	
R736	1-249-417-11	CARBON	1K	5%	1/4W	F
R737	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R738	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R739	1-249-429-11	CARBON	10K	5%	1/4W	
R740	1-249-429-11	CARBON	10K	5%	1/4W	
R741	1-249-415-11	CARBON	680	5%	1/4W	F
R742	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R743	1-249-410-11	CARBON	270	5%	1/4W	F
R744	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R745	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R747	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R748	1-249-429-11	CARBON	10K	5%	1/4W	
R749	1-249-429-11	CARBON	10K	5%	1/4W	
R770	1-249-389-11	CARBON	4.7	5%	1/4W	F
R771	1-247-807-31	CARBON	100	5%	1/4W	
R772	1-247-807-31	CARBON	100	5%	1/4W	
R773	1-247-807-31	CARBON	100	5%	1/4W	
R780	1-249-433-11	CARBON	22K	5%	1/4W	
R781	1-249-433-11	CARBON	22K	5%	1/4W	
R782	1-249-413-11	CARBON	470	5%	1/4W	F
R783	1-249-429-11	CARBON	10K	5%	1/4W	
R801	1-249-431-11	CARBON	15K	5%	1/4W	
R802	1-249-431-11	CARBON	15K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV101	1-238-597-11	RES, ADJ, CARBON 1K	
RV102	1-238-600-11	RES, ADJ, CARBON 10K	
RV103	1-238-601-11	RES, ADJ, CARBON 22K	
RV201	1-238-597-11	RES, ADJ, CARBON 1K	
RV202	1-238-600-11	RES, ADJ, CARBON 10K	
RV203	1-238-601-11	RES, ADJ, CARBON 22K	
RV301	1-241-232-11	RES, VAR, CARBON 20K/20K/20K (REC LEVEL)	
		< RELAY >	
RY301	1-515-726-11	RELAY	
		< SWITCH >	
S601	1-554-303-21	SWITCH, TACTILE (AUTO REC LEVEL)	
S605	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	
		< TRANSFORMER >	
T101	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T201	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T301	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T801	1-450-673-11	TRANSFORMER, DC-DC CONVERTER	
		< VIBRATOR >	
X701	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X702	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

****

*	1-632-741-11	REEL MOTOR BOARD ****************			
		< CAPACITOR >			
C1051	1-124-907-11	ELECT	10uF	20%	50V
C1052	1-124-907-11	ELECT	10uF	20%	50V
C1053	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN1051	1-564-501-11	PIN, CONNECTOR 8P			
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
		< RESISTOR >			
R1051	1-247-825-31	CARBON	560	5%	1/4W

****

Ref. No.	Part No.	Description	Remark

17, 18 leer

SONY-04231

SS-H6600

SERVICE MANUAL

AEP Model
UK Model
E Model

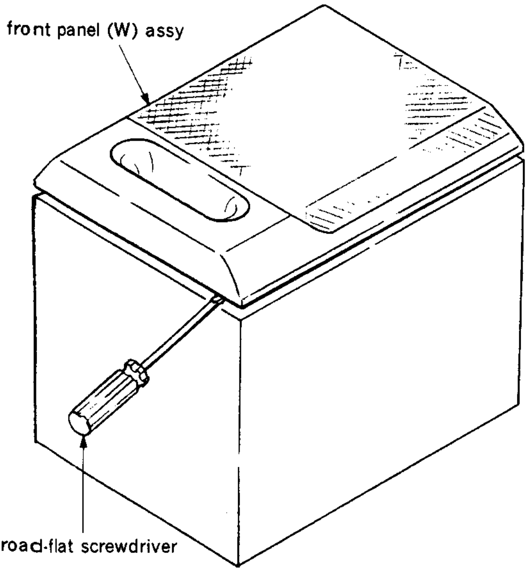
SPECIFICATIONS

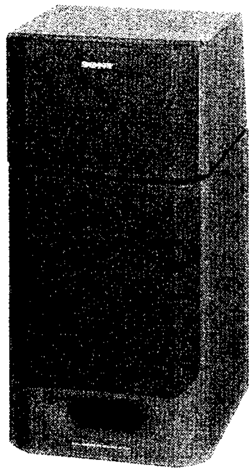
Speaker system	3-way, 4-box type
Satellite unit	
Speaker units	Mid-range: 8cm(3 in.) cone type Tweeter: 2cm($^{13}/_{16}$in.) soft dome type
Power handling capacity	Maximum input power 50W
Sensitivity	89 dB/W/m
Effective frequency range	200-20,000 Hz
Rated impedance	8 ohms
Dimensions	Approx. 185x115x220mm(w/h/d) ($7^3/_8$ x $4^5/_8$ x $8^3/_4$ in.)
Weight	Approx. 1.7 kg (3 lb 12 oz)
Bass unit	
Speaker unit	Woofer: 15cm(6 in.) cone type
Power handling capacity	Maximum input power 70W
Sensitivity	89 dB/W/m
Effective frequency range	40-200 Hz
Rated impedance	6 ohms
Dimensions	Approx. 185x250x220mm(w/h/d) ($7^3/_8$ x $9^7/_8$ x $8^3/_4$ in.)
Weight	Approx. 4.1 kg (9 lb 1 oz)

Design and specifications subject to change without notice.

1. FRONT PANEL (W) ASSY REMOVAL

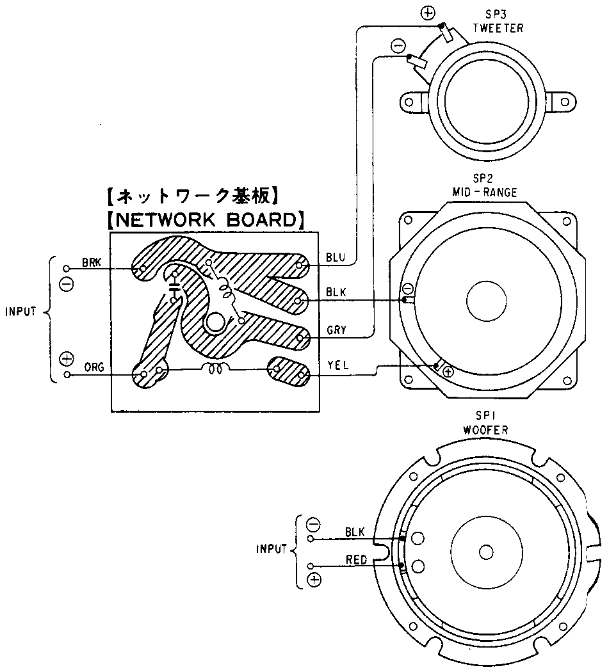
Note : Be careful not to scratch the cabinet.


front panel (W) assy
broad-flat screwdriver



This set is the speaker system in MHC-5600, MHC-6600, FH-E939CD, and FH-E949CD.

2. WIRING DIAGRAM


SP3
TWEETER
⊕
⊖
SP2
MID-RANGE
【ネットワーク基板】
【NETWORK BOARD】
INPUT
⊖
⊕
BRK
ORG
BLU
BLK
GRY
YEL
SP1
WOOFER
INPUT
⊖
⊕
BLK
RED

SPEAKER SYSTEM

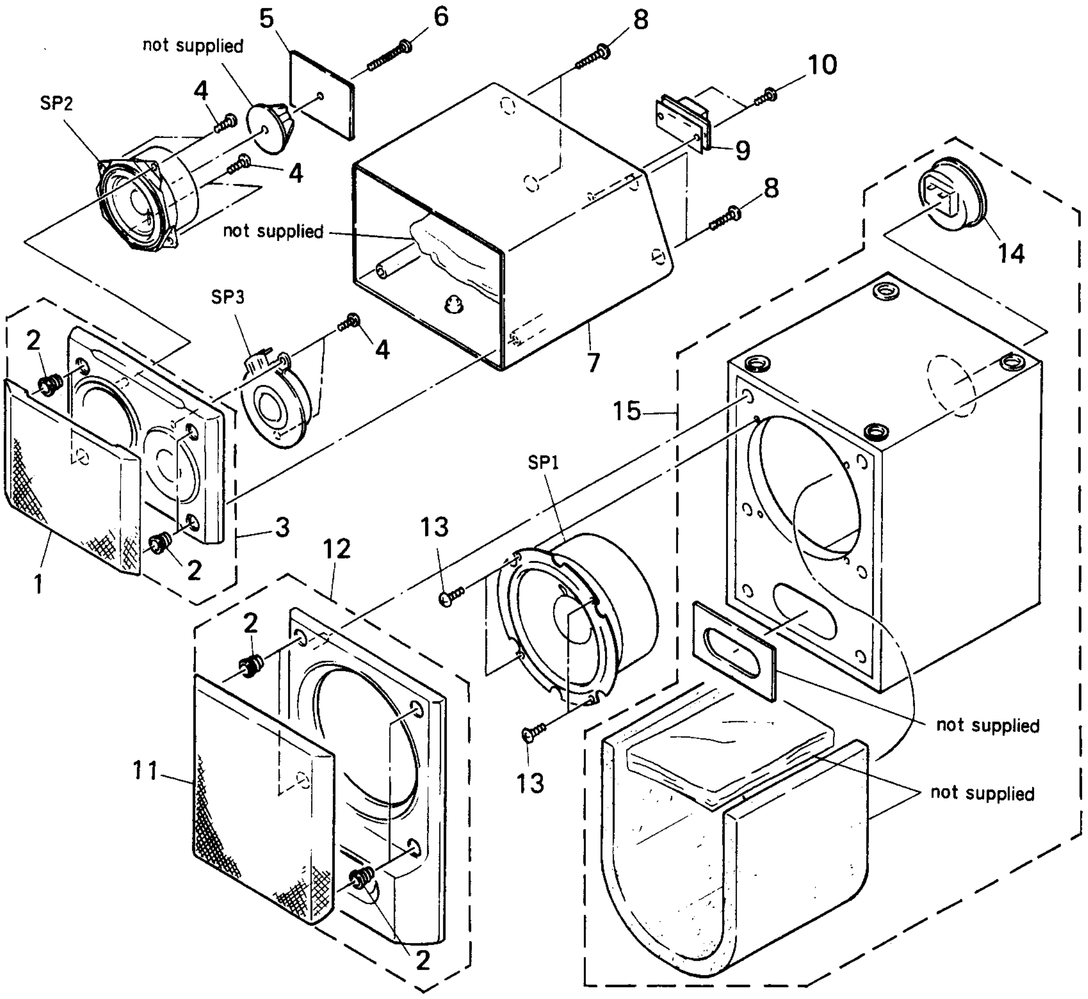
SONY®

MICROFILM

3. EXPLODED VIEW AND PARTS LIST

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color



Ref.No	Part No.	Description	Remarks
1	X-4941-269-1	FRAME (S) ASSY, GRILLE	
2	*4-912-253-01	CATCHER	
3	X-4941-370-1	PANEL (S) ASSY, FRONT	
4	7-685-660-79	SCREW +BVTP 4×10 TYPE2 IT-3	
5	*1-589-323-11	MOUNTED PC BOARD (NETWORK)	
6	7-685-878-01	SCREW +BVTT 3×25 (S)	
7	X-4941-270-1	CABINET (S) ASSY, SPEAKER	
8	7-685-663-79	SCREW +BVTP 4×16 TYPE2 IT-3	
9	1-537-337-31	TERMINAL BOARD (2P SP)	
10	7-685-647-79	SCREW +BVTP 3×10 TYPE2 N-S	
11	X-4941-271-1	FRAME (W) ASSY, GRILLE	
12	X-4941-439-2	PANEL (W) ASSY, FRONT	
13	4-874-614-11	SCREW (4) (3.5×14), TAPPING	
14	1-537-145-11	TERMINAL BOARD (SPEAKER)	
15	X-4941-398-1	CABINET (W) ASSY, SPEAKER (AEP, UK, E)	
15	X-4941-399-1	CABINET (W) ASSY, SPEAKER (Germany)	
SP1	1-544-434-21	SPEAKER (15CM)	
SP2	1-544-433-11	SPEAKER (8CM)	
SP3	1-544-432-11	SPEAKER (2.5CM)	

ACCESSORY&PACKING MATERIAL
****

1-590-855-11	CORD, SPEAKER (AEP, Germany)
3-753-188-11	MANUAL, INSTRUCTION (AEP, Germany)
3-694-922-01	SHEET, PROTECTION

Sony Corporation
Audio Group

Published by Customer Relations and Service Group

CDP-H6600

SERVICE MANUAL

AEP Model
UK Model
E Model

This set is the CD player section in MHC-5600/6600 and FH-E939CD.

Model Name Using Similar Mechanism	CDP-H300
CD Mechanism Type	CDM13B-5BD5
Base Unit Name	BU-5BD5

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SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Signal to noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (at 1 kHz)
Channel separation	More than 90 dB
Output level	2 V (at 50 kilohms)
Load impedance	More than 10 kilohms
Outputs	DIGITAL OUT OPTICAL (optical output connector): wave length 660 nm, output level –18 dBm

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

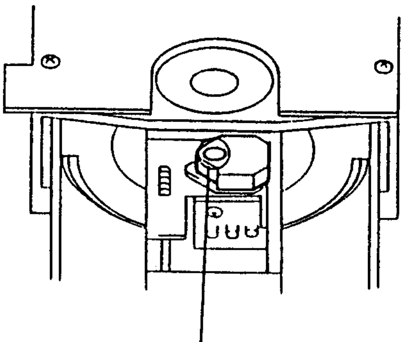
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

COMPACT DISC PLAYER

SONY®

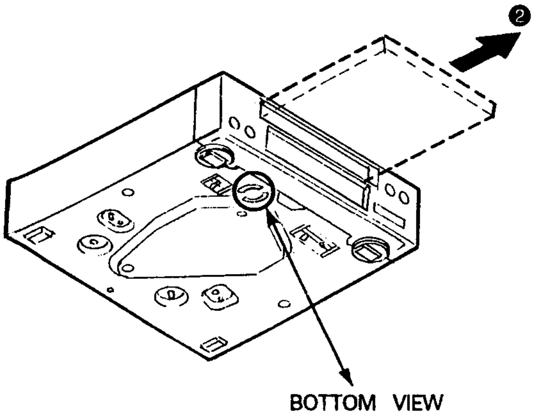
LASER DIODE AND FOCUS SEARCH OPERATION CHECK

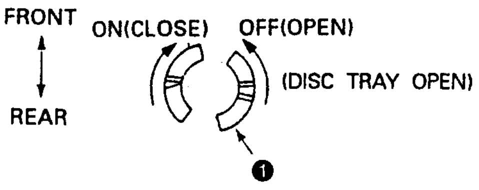
1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



❶ Confirm that laser beam is spread.
❷ Up and down motion of the objective lens. (3 times)

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF





(1) Insert to ❶ for tapering driver, etc., and turn in the direction of arrow OFF. (Disc tray open)
(2) Tray as come out little of front panel, pull out in the direction of arrow ❷ by hand.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

- The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective sureface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1

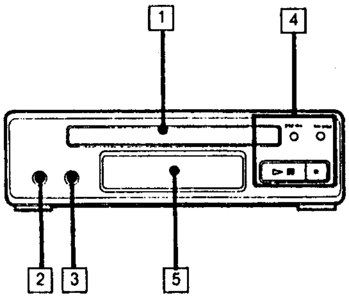
GENERAL

LOCATION OF CONTROLS

This section is extracted from instruction manual.

CD Player Section

1. Disc tray
2. CHECK button
3. EDIT/TIME FADE button
4. CD operation buttons
   - ⏏ : OPEN/CLOSE
   - ▷II : Play/pause
   - |◁◁ ◀◀ ▶▶ ▷▷| : Manual search (when kept depressed)/Automatic Music Sensor (when pressed)
5. Display window



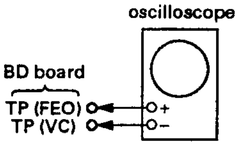
SECTION 2

ELECTRICAL BLOCK CHECKING

Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

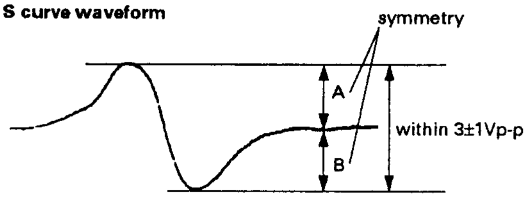
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

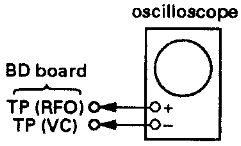
S curve waveform



5. After check, remove the lead wire connected in step 2.

Note :
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



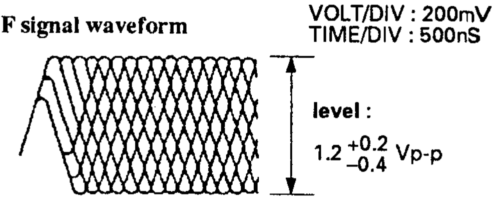
Procedure :

1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

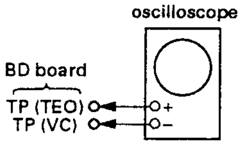
Note :

Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

RF signal waveform



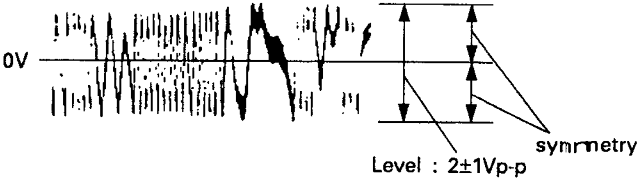
E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope

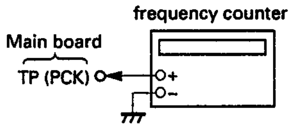


6. Remove the lead wire connected in step 1.

RF PLL FREE-RUN FREQUENCY CHECK

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.


frequency counter
Main board
TP (PCK)
+
–

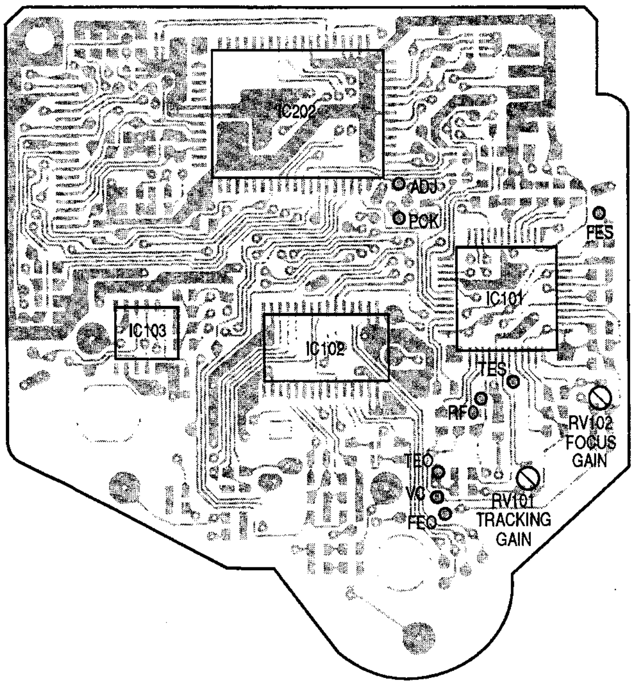
2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Checking for Location

[BD BOARD] – Conductor Side –


IC202
ADJ
PCK
FES
IC101
IC103
IC102
TES
RFO
RV102
FOCUS
GAIN
TEO
VC
FEO
RV101
TRACKING
GAIN

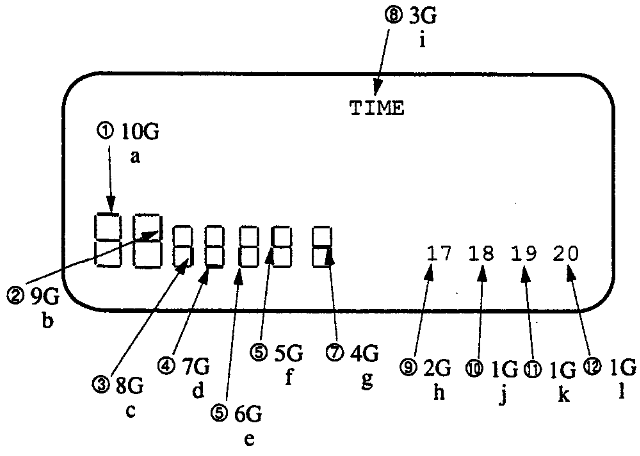
[TEST MODES]

1. Test mode of display micon (IC401)

Ground Pin ㉝ of IC401 to GND and turn ON the POWER switch, thus you can test the following 3 tests.

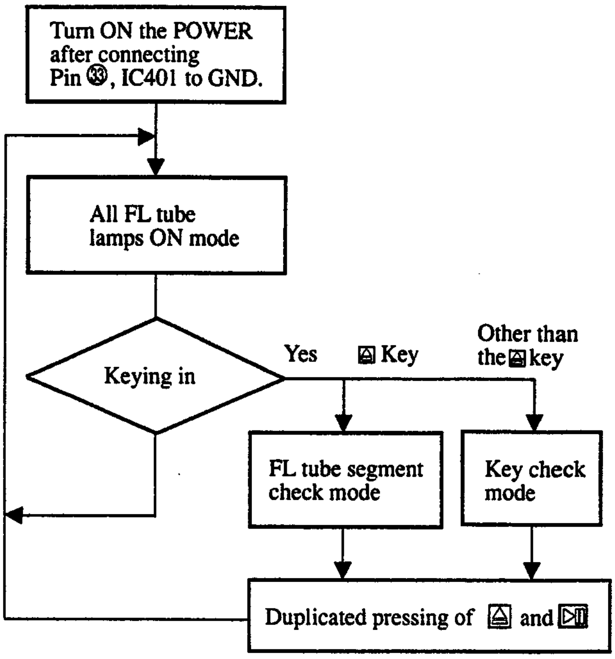
(1) All FL tube lamps
This mode is actuated immediately after turning ON the POWER switch.

(2) FL tube segment check
This mode is actuated by pressing the ⏏ key in the state of (1). Every time the ⏏ key is pressed, the segments are indicated sequentially from the segment a. When the last l segment is displayed, keying in is no longer accepted while continuing the lighting-up state of the last segment. Conditions are normal provided all lamps light up in the following order.


⑧ 3G
i
TIME
① 10G
a
② 9G
b
③ 8G
c
④ 7G
d
⑤ 6G
e
⑤ 5G
f
⑦ 4G
g
⑨ 2G
h
⑩ 1G
j
⑪ 1G
k
⑫ 1G
l
17
18
19
20

(3) KEY check
This mode is effected by pressing the ⏏ key in the state of (1), while indicating "1." Every time a new key is pressed subsequently, the indicated number is incremented. Conditions are normal provided "7" is indicated when all types of keys are pressed. Even if a key is pressed again, it is not counted.

* To leave the mode (2) or (3), press the ⏏ and ⏯ keys in duplication, thereby the mode returning to all ON mode.


Turn ON the POWER after connecting Pin ㉝, IC401 to GND.
All FL tube lamps ON mode
Keying in
Yes
⏏ Key
Other than the ⏏ key
FL tube segment check mode
Key check mode
Duplicated pressing of ⏏ and ⏯

2. Test Modes of CD Syscon (IC202)

(1) ADJUST mode
When this mode is effected, the machine is operated normally except for the following.

- When pin ⑲, IC202 (ADJ) is set to "L" after turning ON the POWER switch:

1. GFS is no longer monitored during PLAY, PAUSE or SEARCH, while not stopping even with GFS remaining still at "L" (NG).
2. No high-speed feeding is activated during SEARCH.
3. Focus gain is reset to normal gain during PLAY (normally, the gain is lowered to reduce noise when FOCUS is locked).

- When Pin ⑬, IC202 (AFADJ) is set to "L" after turning ON the POWER switch:

1. Regardless of Pin ⑲ (ADJ) of the CLV-S fixed function, the CLV mode during PLAY becomes CLV-S (rough servo) only while Pin ⑬ remains "L".

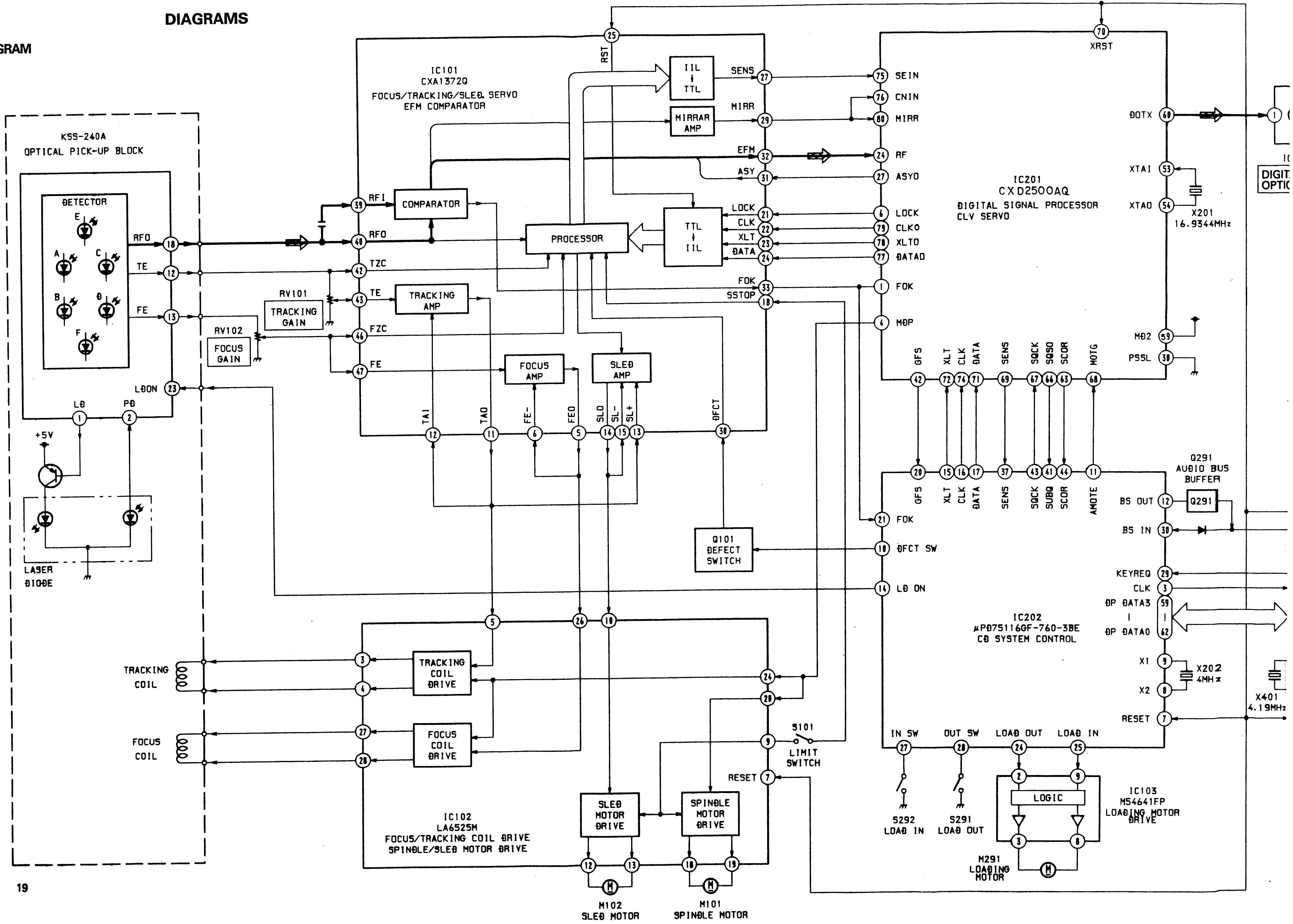
(2) AFADJUST mode
In this mode, it is possible to check the interface between the display micon (IC401) and CD syscon (IC202).

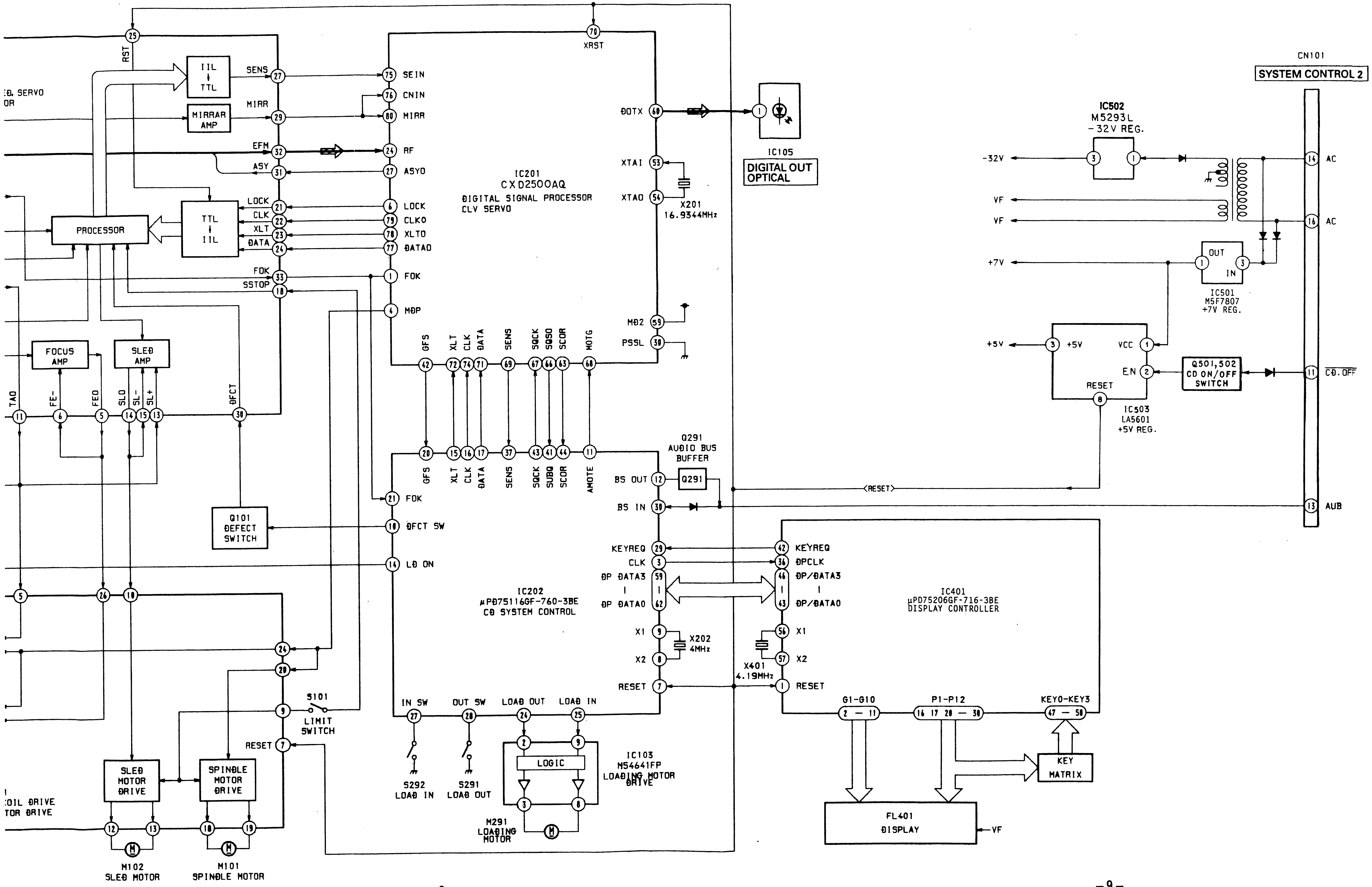
- Set Pin ⑬, IC202 (AFADJ) to "L" before turning ON the POWER switch.

1. Every time the ⏏ key is pressed after turning On the POWER switch, indication on the FL tube is switched correspondingly. Conditions are normal provided the indication repeats the 4 patterns including all lamp ON.

SECTION 3
DIAGRAMS

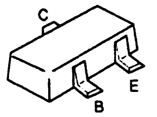
3-1. BLOCK DIAGRAM


KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
E
A
C
B
D
F
RFO
TE
FE
LDON
LD
PD
+5V
LASER DIODE
IC101
CXA1372Q
FOCUS/TRACKING/SLED SERVO
EFM COMPARATOR
RFI
RFO
TZC
TE
FZC
FE
COMPARATOR
RV101
TRACKING GAIN
RV102
FOCUS GAIN
TRACKING AMP
FOCUS AMP
SLED AMP
PROCESSOR
IIL ↓ TTL
TTL ↓ IIL
MIRRAR AMP
RST
SENS
MIRR
EFM
ASY
LOCK
CLK
XLT
DATA
FOK
SSTOP
TA1
TAO
FE-
FEO
SLO
SL-
SL+
DFCT
Q101
DEFECT SWITCH
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
SEIN
CNIN
MIRR
RF
ASYO
LOCK
CLKO
XLTO
DATAO
FOK
MDP
XRST
DOTX
XTAI
XTAO
X201
16.9344MHz
MD2
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MOTG
SUBQ
AMOTE
Q291
AUDIO BUS BUFFER
BS OUT
BS IN
KEYREQ
CLK
DP DATA3
DP DATA0
X1
X2
X202
4MHz
RESET
X401
4.19MHz
IC202
µPD75116GF-760-3BE
CD SYSTEM CONTROL
FOK
DFCT SW
LD ON
IN SW
OUT SW
LOAD OUT
LOAD IN
S292
LOAD IN
S291
LOAD OUT
LOGIC
IC103
M54641FP
LOADING MOTOR DRIVE
M291
LOADING MOTOR
TRACKING COIL
FOCUS COIL
TRACKING COIL DRIVE
FOCUS COIL DRIVE
IC102
LA6525M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
S101
LIMIT SWITCH
RESET
M102
SLED MOTOR
M101
SPINDLE MOTOR
DIGIT
OPTIC
19

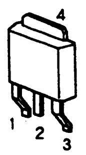

RST
IIL → TTL
SENS
MIRR
MIRRAR AMP
EFM
ASY
LOCK
CLK
XLT
DATA
TTL → IIL
PROCESSOR
FOK
SSTOP
FOCUS AMP
SLED AMP
TAO
FE-
FEO
SLO
SL-
SL+
DFCT
Q101 DEFECT SWITCH
S101 LIMIT SWITCH
RESET
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
M102 SLED MOTOR
M101 SPINDLE MOTOR
COIL DRIVE
TOR DRIVE
ED, SERVO
OR
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCK
CLKO
XLTO
DATAO
FOK
MDP
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
DOTX
XTAI
XTAO
X201
16.9344MHz
MD2
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MOTG
SUBQ
AMOTE
FOK
DFCT SW
LD ON
IC202
µPD75116GF-760-3BE
CD SYSTEM CONTROL
IN SW
OUT SW
LOAD OUT
LOAD IN
S292 LOAD IN
S291 LOAD OUT
LOGIC
IC103
M54641FP
LOADING MOTOR DRIVE
M291 LOADING MOTOR
Q291 AUDIO BUS BUFFER
BS OUT
BS IN
Q291
KEYREQ
CLK
DP DATA3
DP DATA0
X1
X2
X202 4MHz
RESET
IC105
DIGITAL OUT OPTICAL
KEYREQ
DPCLK
DP/DATA3
DP/DATA0
X401 4.19MHz
IC401
µPD75206GF-716-3BE
DISPLAY CONTROLLER
G1-G10
P1-P12
KEY0-KEY3
KEY MATRIX
FL401 DISPLAY
VF
RESET
IC502
M5293L
-32V REG.
-32V
VF
VF
+7V
+5V
OUT
IN
IC501
M5F7807
+7V REG.
+5V
VCC
EN
RESET
IC503
LA5601
+5V REG.
Q501,502 CD ON/OFF SWITCH
CN101
SYSTEM CONTROL 2
AC
AC
CD.OFF
AUB

3-2. SEMICONDUCTOR LEAD LAYOUTS

2SA1162-G
2SC3052-EF
2SC3395
2SC3624A-L16
2SC4154-F

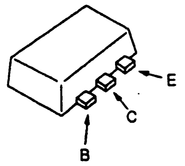


2SA1341
2SB1122-S

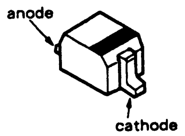


1 : BASE
2 : COLLECTOR
3 : EMITTER
4 : COLLECTOR

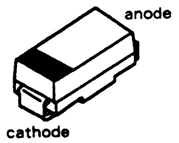
2SB1122-S
2SD1623



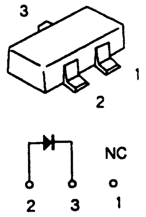
DTZ4.7B
1SS355


anode
cathode

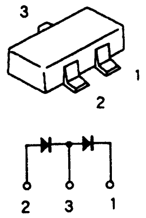
EC10DS2
EC10QS-04


anode
cathode

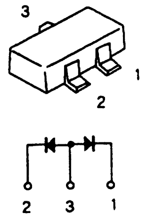
RD6.8M-B2
RD8.2M-B3



1SS266



1S2836

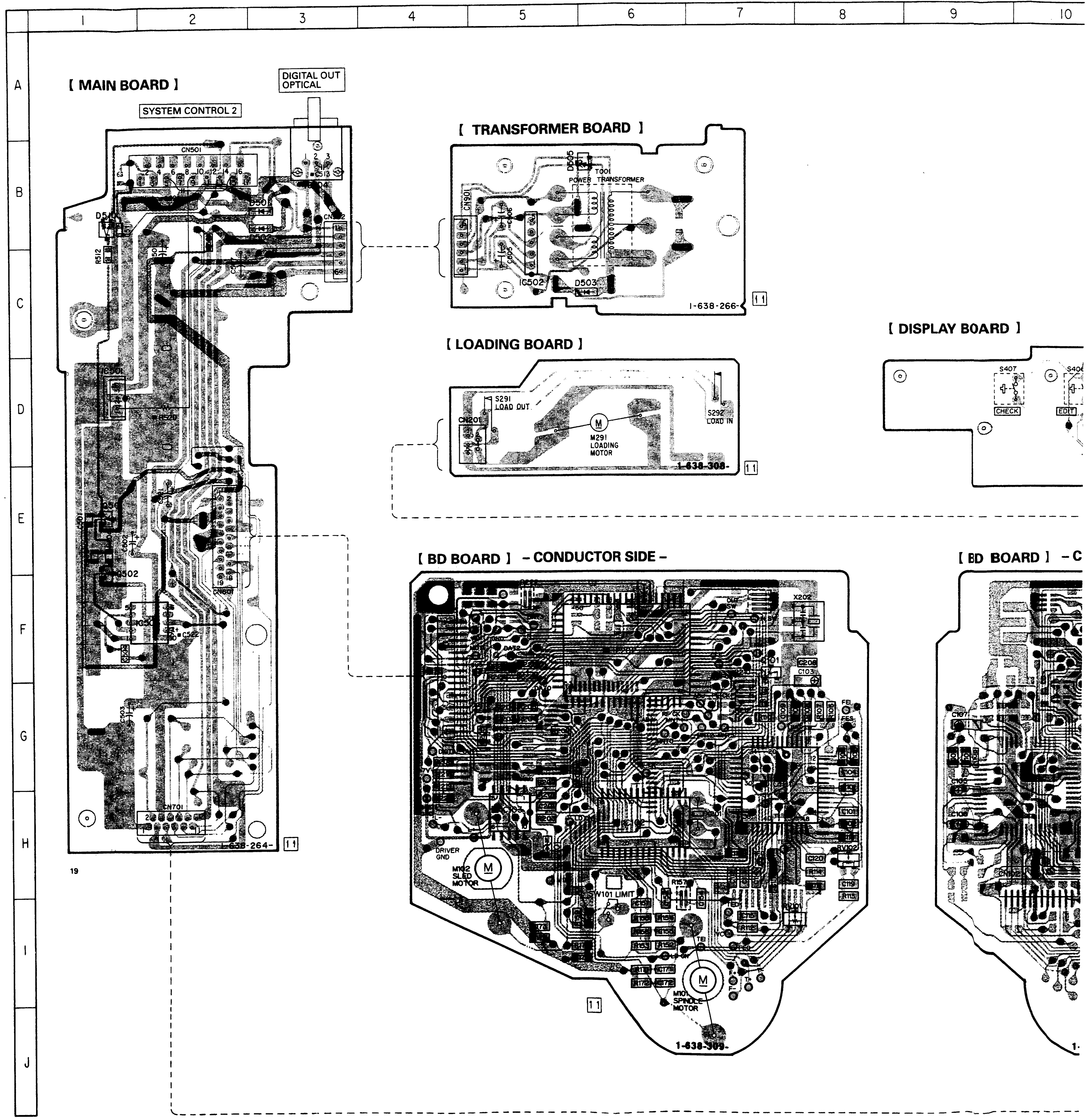


• SEMICONDUCTOR LOCATION

Ref. No.	Location
IC101	D-1
IC101	G-7
IC102	B-5
IC102	H-6
IC103	B-2
IC103	H-5
IC105	B-3
IC201	G-11
IC202	F-6
IC301	G-12
IC302	F-12
IC304	F-1
IC401	D-12
Q101	C-1
Q101	F-7
Q102	B-1
Q103	B-1
Q201	F-12
Q201	G-13
Q301	G-1
Q302	E-1
Q303	G-1
Q304	E-1
Q305	E-1
Q306	E-1
D101	B-3
D101	H-5
D102	B-3
D103	B-3
D104	B-6
D106	B-6
D113	B-3
D131	B-3
D201	F-12
D301	E-1
D302	E-1
D305	E-1
D306	E-1
D401	D-14
D402	D-15
D403	D-11

Note:
- •o——— : indicated a lead wire mounted on the component side.
- ■ : Part mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

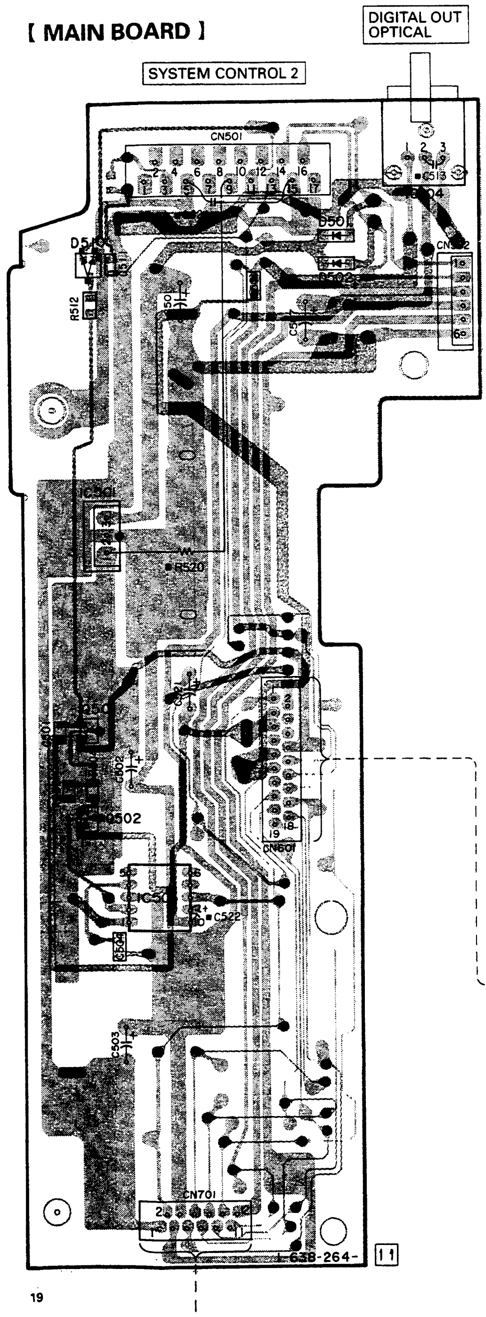
3-3. PRINTED WIRING BOARDS


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
[MAIN BOARD]
DIGITAL OUT OPTICAL
SYSTEM CONTROL 2
CN501
CN502
R512
IC501
R520
C502
Q502
CN701
CN601
C503
1-638-264-
11
19
[TRANSFORMER BOARD]
T001 POWER TRANSFORMER
D505
D501
IC502
D503
1-638-266-
11
[LOADING BOARD]
S291 LOAD OUT
S292 LOAD IN
CN201
M291 LOADING MOTOR
1-638-308-
11
[DISPLAY BOARD]
S407
S406
CHECK
EDIT
[BD BOARD] - CONDUCTOR SIDE -
X202
DRIVER GND
M102 SLED MOTOR
M
S101 LIMIT
M101 SPINDLE MOTOR
R157
C206
C103
C120
C119
C118
1-638-309-
11
[BD BOARD] - C

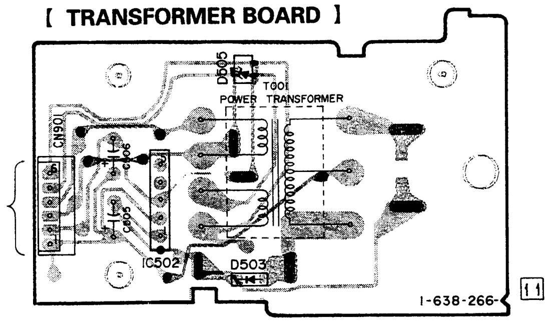
PRINTED WIRING BOARDS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

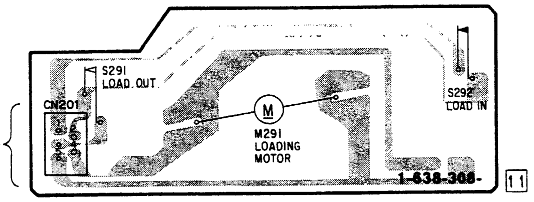
[MAIN BOARD]


DIGITAL OUT
OPTICAL
SYSTEM CONTROL 2
CN501
D501
R512
CN502
IC502
C522
CN701
1-638-264-
11
19

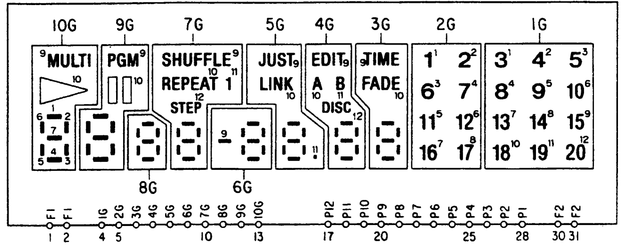
[TRANSFORMER BOARD]


T901
POWER TRANSFORMER
D505
IC502
D503
1-638-266-
11

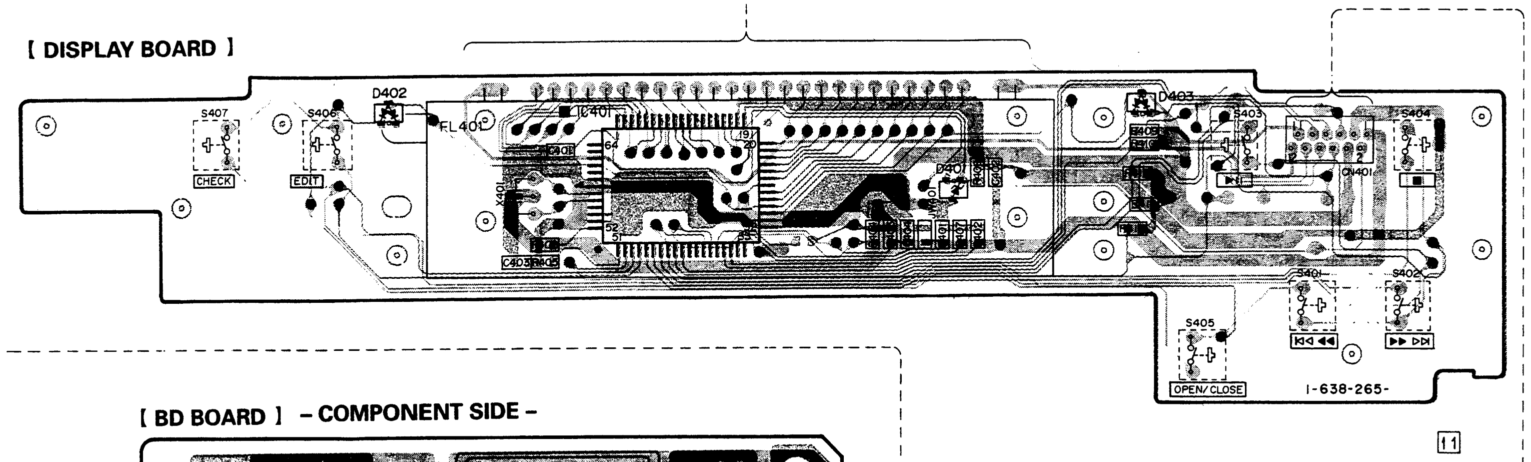
[LOADING BOARD]


S291
LOAD OUT
S292
LOAD IN
CN201
M
M291
LOADING
MOTOR
1-638-308-
11

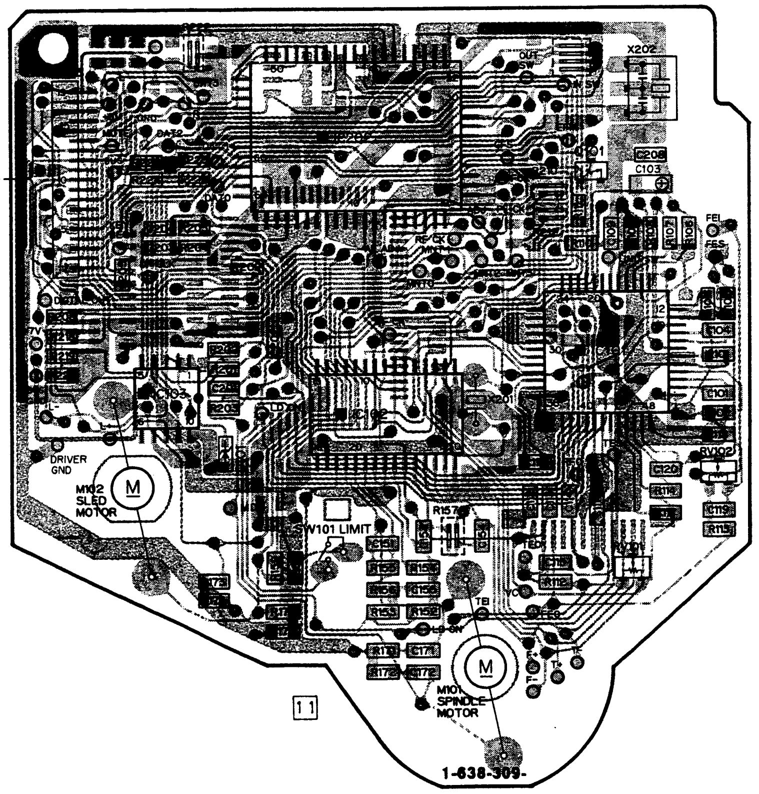
FL401 FLUORESCENT INDICATOR TUBE


10G
9G
7G
5G
4G
3G
2G
1G
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
8G
6G
F1 F1 1G 2G 3G 4G 5G 6G 7G 8G 9G 10G P12 P11 P10 P9 P8 P7 P6 P5 P4 P3 P2 P1 F2 F2
1 2 4 5 10 13 17 20 25 28 30 31

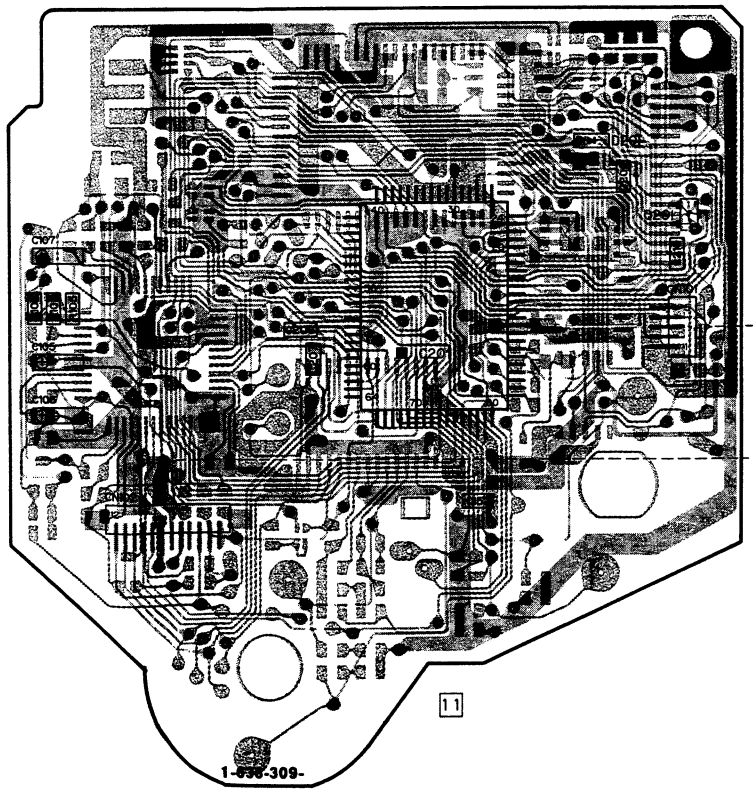
[DISPLAY BOARD]


S407
CHECK
S406
EDIT
D402
FL401
D403
S403
S404
CN401
D407
S401
S402
S405
OPEN/CLOSE
1-638-265-
11

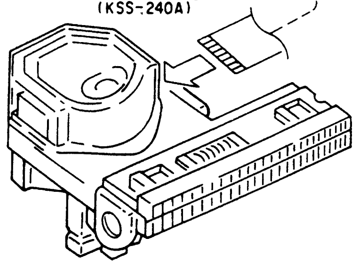
[BD BOARD] - CONDUCTOR SIDE -


X202
C103
DRIVER
GND
M102
SLED
MOTOR
M
W101 LIMIT
RV102
M
M101
SPINDLE
MOTOR
1-638-309-
11

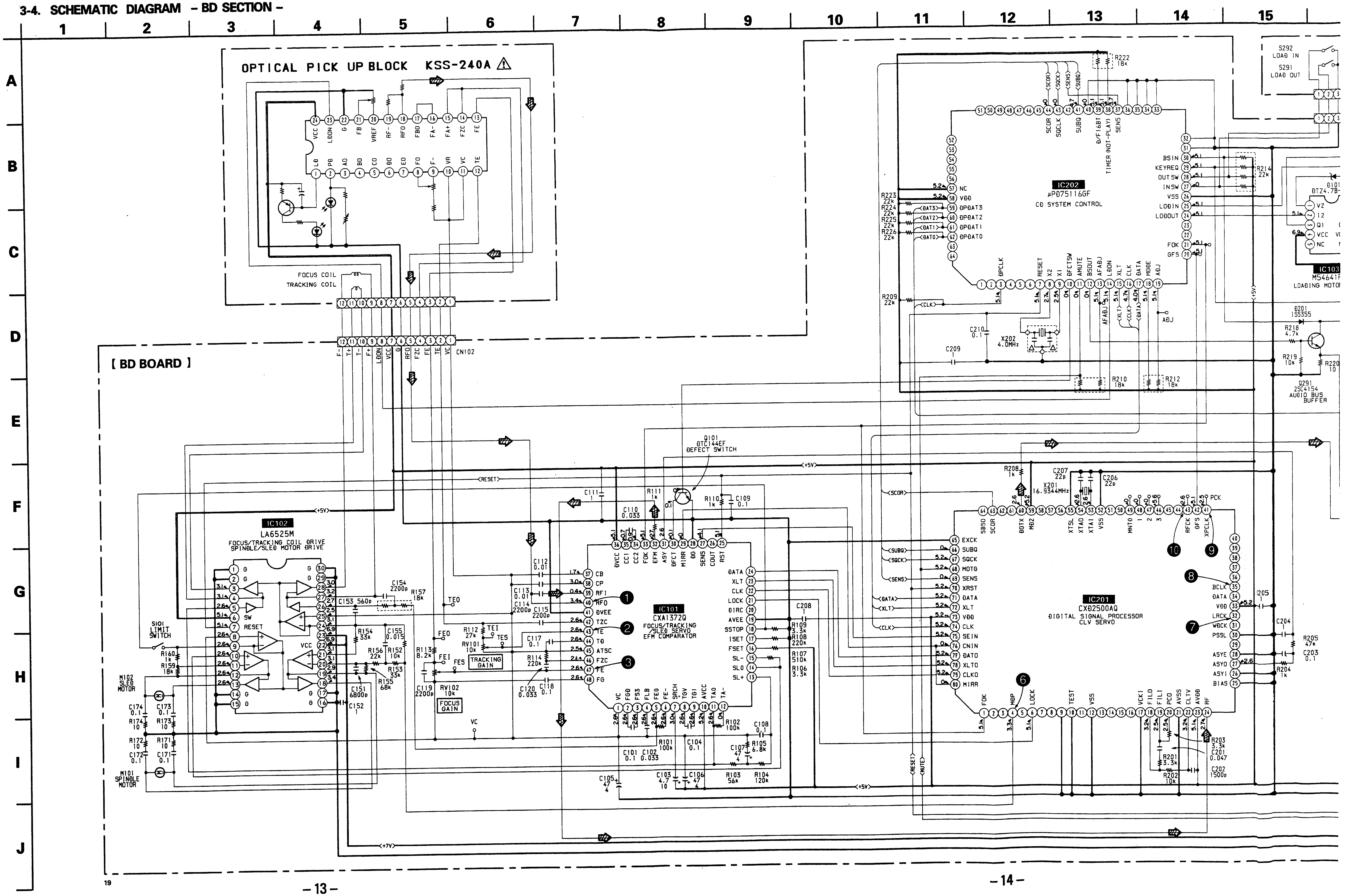
[BD BOARD] - COMPONENT SIDE -

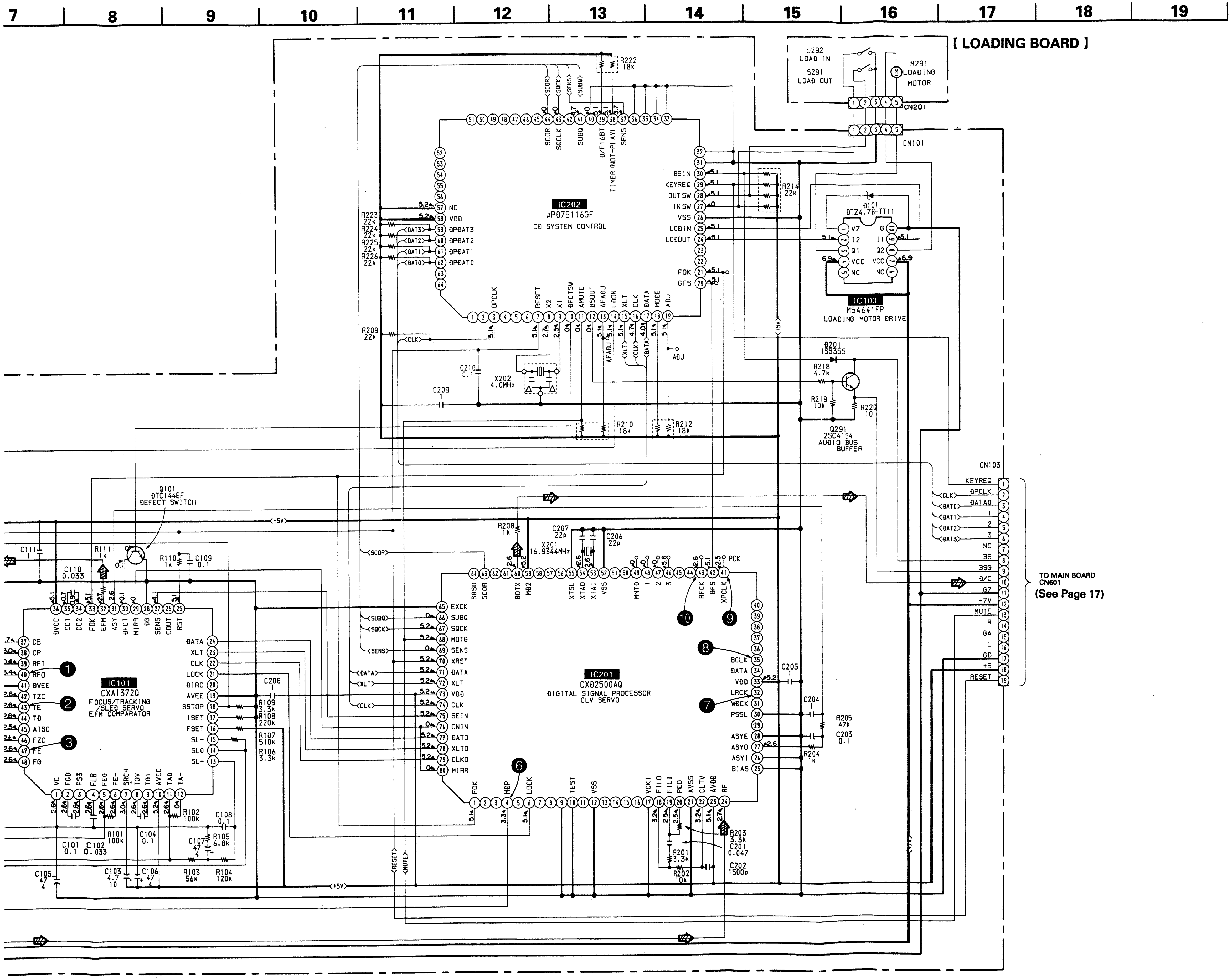


OPTICAL PICK-UP BLOCK
(KSS-240A)

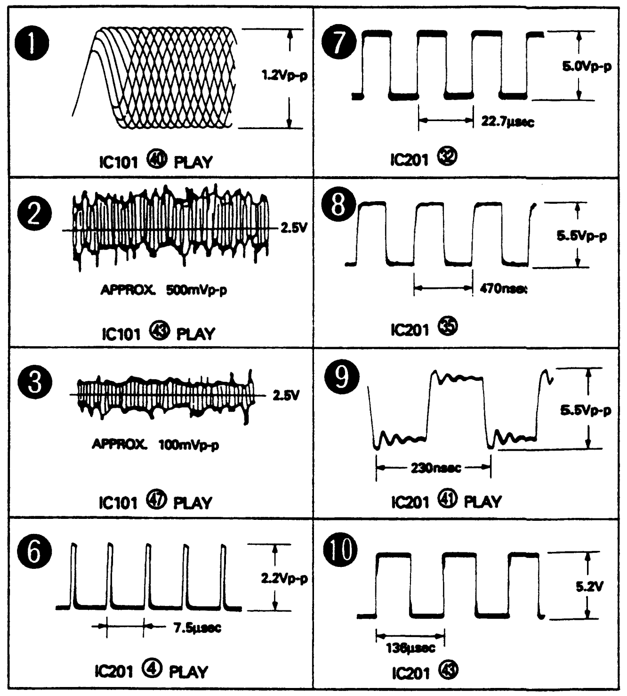


3-4. SCHEMATIC DIAGRAM - BD SECTION -


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
OPTICAL PICK UP BLOCK KSS-240A ⚠
FOCUS COIL
TRACKING COIL
CN102
[BD BOARD]
IC102
LA6525M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
IC101
CXA1372Q
FOCUS/TRACKING/SLED SERVO
EFM COMPARATOR
Q101
DTC144EF
DEFECT SWITCH
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
IC202
μPD75116GF
CD SYSTEM CONTROL
X201
16.9344MHz
X202
4.0MHz
S101
LIMIT SWITCH
M102
SLED MOTOR
M101
SPINDLE MOTOR
RV101
TRACKING GAIN
RV102
FOCUS GAIN
S292
LOAD IN
S291
LOAD OUT
IC103
M54641P
LOADING MOTOR
D101
DTZ4.7B
D201
1SS355
Q291
2SC4154
AUDIO BUS BUFFER
<+5V>
<+7V>
<RESET>
<MUTE>


7
8
9
10
11
12
13
14
15
16
17
18
19
[LOADING BOARD]
S292 LOAD IN
S291 LOAD OUT
M291 LOADING MOTOR
CN201
CN101
IC202
μPD75116GF
CD SYSTEM CONTROL
R222 18k
D101 DTZ4.7B-TT11
IC103
M54641FP
LOADING MOTOR DRIVE
R214 22k
D201 1SS355
R218 4.7k
R219 10k
R220 10
Q291 2SC4154 AUDIO BUS BUFFER
X202 4.0MHz
C209
C210 0.1
R210 18k
R212 18k
R223 22k
R224 22k
R225 22k
R226 22k
R209 22k
Q101 DTC144EF DEFECT SWITCH
IC101
CXA1372Q
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR
IC201
CXD2500AQ
DIGITAL SIGNAL PROCESSOR CLV SERVO
X201 16.9344MHz
R208 1k
C207 22p
C206 22p
C111 1
R111 1k
R110 1k
C109 0.1
C110 0.033
C208 1
R109 3.3k
R108 220k
R107 510k
R106 3.3k
R102 100k
C108 0.1
R101 100k
C104 0.1
C107 47
R105 6.8k
C101 0.1
C102 0.033
C105 47 4
C103 4.7 10
C106 47 4
R103 56k
R104 120k
C205 1
C204 1
R205 47k
C203 0.1
R204 1k
R203 3.3k
C201 0.047
R201 3.3k
R202 10k
C202 1500p
CN103
KEYREQ
DPCLK
DATA0
1
2
3
NC
BS
BSG
D/O
G7
+7V
MUTE
R
GA
L
GD
+5
RESET
TO MAIN BOARD CN601
(See Page 17)

• WAVEFORMS



Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : internal component.

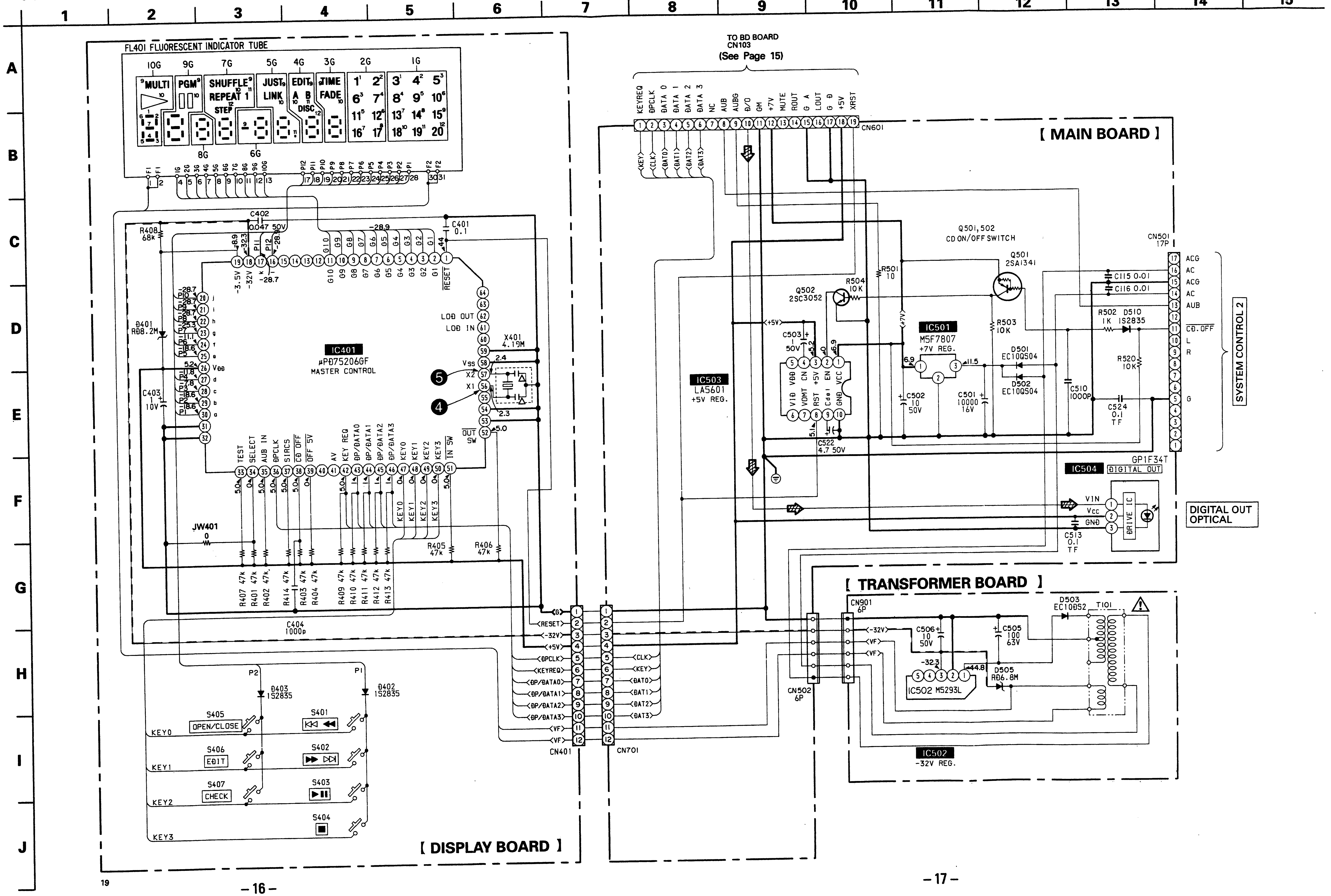
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬▬▬: B + Line.
- ▪▪▪▪: B – Line.
- ☐: adjustment for repair.
- Voltages are DC between measurement points and ground.
- no mark : PLAY
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path

⇨: CD

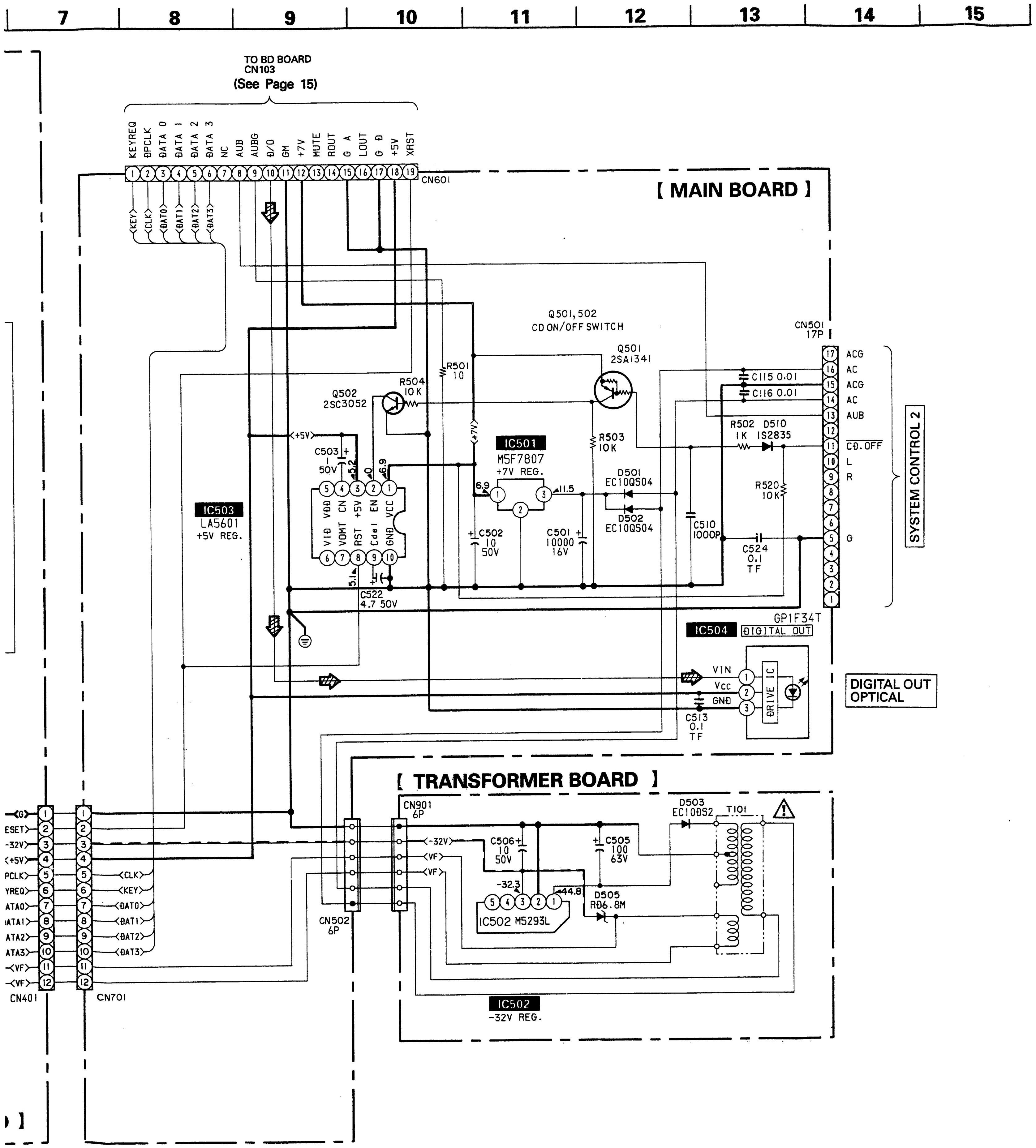
3-5. SCHEMATIC DIAGRAM - MAIN SECTION -

• See page 15 for note.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
FL401 FLUORESCENT INDICATOR TUBE
10G 9G 7G 5G 4G 3G 2G 1G
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
8G 6G
C402 0.047 50V
C401 0.1
R408 68k
IC401
μPD75206GF
MASTER CONTROL
X401 4.19M
LOD OUT
LOD IN
VDD
VSS
X2
X1
RESET
OUT SW
TEST
SELECT
AUB IN
DPCLK
SIRCS
CD OFF
OFF 5V
AV
KEY REQ
DP/DATA0
DP/DATA1
DP/DATA2
DP/DATA3
KEY0
KEY1
KEY2
KEY3
IN SW
D401 RD8.2M
C403 1 10V
JW401 0
R405 47k
R406 47k
R407 47k
R401 47k
R402 47k
R414 47k
R403 47k
R404 47k
R409 47k
R410 47k
R411 47k
R412 47k
R413 47k
C404 1000p
D403 1S2835
D402 1S2835
P2
P1
S405 OPEN/CLOSE
S401
S406 EDIT
S402
S407 CHECK
S403
S404
KEY0
KEY1
KEY2
KEY3
[DISPLAY BOARD]
CN401
CN701
TO BD BOARD CN103 (See Page 15)
KEYREQ
DPCLK
DATA 0
DATA 1
DATA 2
DATA 3
NC
AUB
AUBG
D/O
GM
+7V
MUTE
ROUT
G A
LOUT
G D
+5V
XRST
CN601
[MAIN BOARD]
Q501,502 CD ON/OFF SWITCH
Q501 2SA1341
Q502 2SC3052
R504 10K
R501 10
R503 10K
IC501 M5F7807 +7V REG.
IC503 LA5601 +5V REG.
C503 1 50V
C502 10 50V
C501 10000 16V
C522 4.7 50V
D501 EC10QS04
D502 EC10QS04
C510 1000P
C524 0.1 TF
R502 1K
D510 1S2835
R520 10K
CN501 17P
C115 0.01
C116 0.01
ACG
AC
AUB
CD.OFF
L
R
G
SYSTEM CONTROL 2
IC504 DIGITAL OUT
GP1F34T
VIN
Vcc
GND
DRIVE IC
C513 0.1 TF
DIGITAL OUT OPTICAL
[TRANSFORMER BOARD]
CN901 6P
CN502 6P
C506 10 50V
C505 100 63V
IC502 M5293L
D505 RD6.8M
D503 EC10QS2
T101
IC502 -32V REG.
<-32V>
<VF>
<G>
<RESET>
<+5V>
<DPCLK>
<KEYREQ>
<DP/DATA0>
<DP/DATA1>
<DP/DATA2>
<DP/DATA3>
<CLK>
<KEY>
<DAT0>
<DAT1>
<DAT2>
<DAT3>
⑤
④

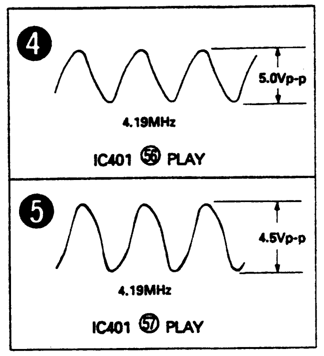
19

VIDE-13772/Druck 7



7
8
9
10
11
12
13
14
15
TO BD BOARD
CN103
(See Page 15)
KEYREQ
ĐPCLK
ĐATA 0
ĐATA 1
ĐATA 2
ĐATA 3
NC
AUB
AUBG
Đ/O
GM
+7V
MUTE
ROUT
G A
LOUT
G Đ
+5V
XRST
CN601
[MAIN BOARD]
<KEY>
<CLK>
<ĐATO>
<ĐAT1>
<ĐAT2>
<ĐAT3>
Q501,502
CD ON/OFF SWITCH
Q501
2SA1341
Q502
2SC3052
R504
10K
R501
10
<+5V>
<+7V>
C503
1
50V
5.2
0
6.9
IC501
M5F7807
+7V REG.
6.9
11.5
R503
10K
D501
EC10QS04
D502
EC10QS04
IC503
LA5601
+5V REG.
VIĐ
VĐĐ
VOMT
CN
RST
+5V
Cdel
EN
GNĐ
VCC
5.1
C522
4.7 50V
C502
10
50V
C501
10000
16V
C510
1000P
CN501
17P
C115 0.01
C116 0.01
R502 D510
1K 1S2835
R520
10K
C524
0.1
TF
ACG
AC
ACG
AC
AUB
CĐ.OFF
L
R
G
SYSTEM CONTROL 2
GP1F34T
IC504
ĐIGITAL OUT
VIN
Vcc
GNĐ
ĐRIVE IC
C513
0.1
TF
DIGITAL OUT
OPTICAL
[TRANSFORMER BOARD]
CN901
6P
<-32V>
<VF>
<VF>
C506
10
50V
C505
100
63V
D503
EC10DS2
T101
-32.3
44.8
D505
RĐ6.8M
IC502 M5293L
CN502
6P
IC502
-32V REG.
<G>
ESET>
-32V>
<+5V>
PCLK>
YREQ>
ATA0>
ATA1>
ATA2>
ATA3>
<VF>
<VF>
<CLK>
<KEY>
<ĐATO>
<ĐAT1>
<ĐAT2>
<ĐAT3>
CN401
CN701

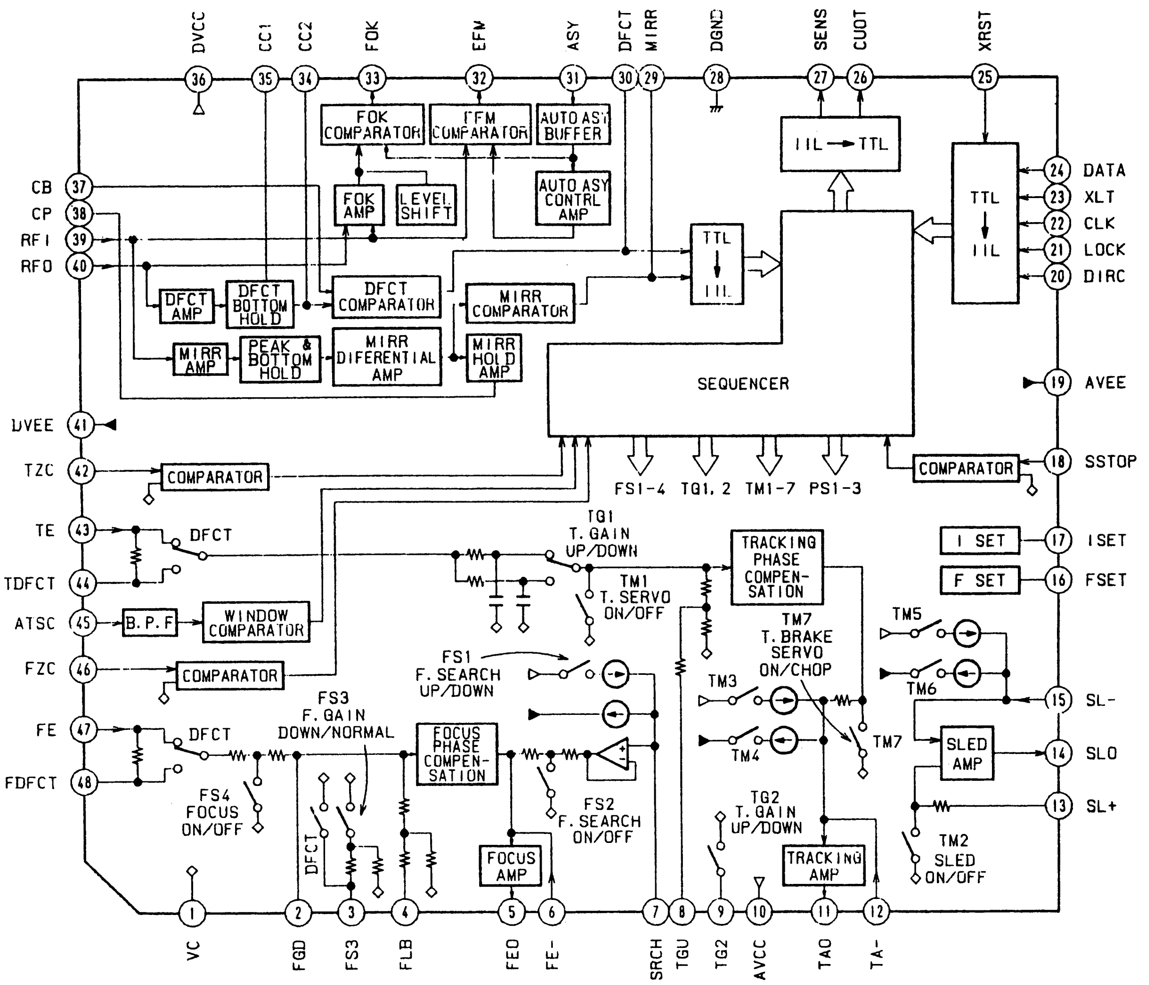
• WAVEFORMS



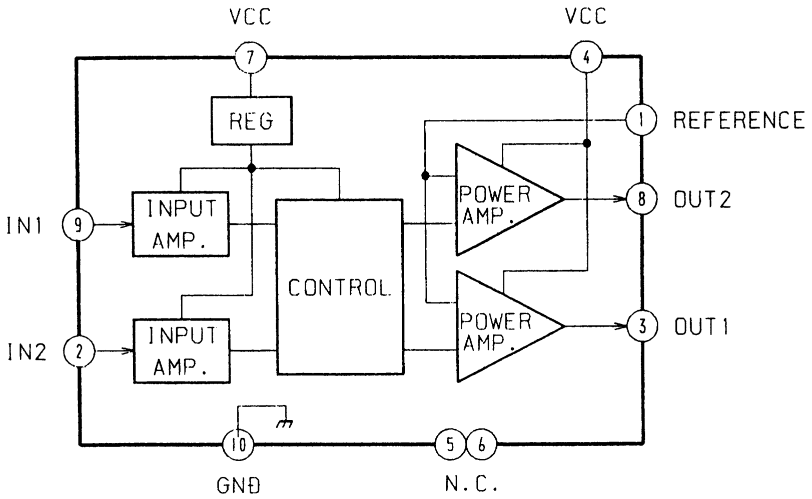
4
5.0Vp-p
4.19MHz
IC401 56 PLAY
5
4.5Vp-p
4.19MHz
IC401 57 PLAY

3-6. IC BLOCK DIAGRAMS

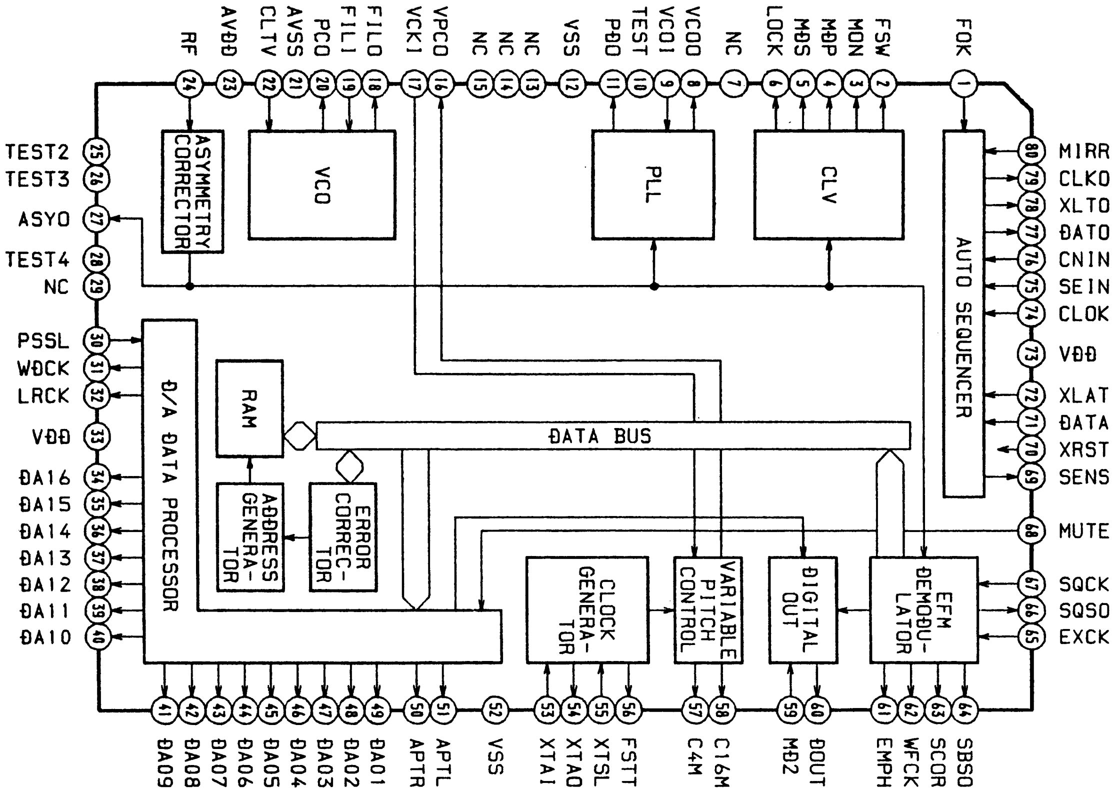
IC101 CXA1372Q


DVCC
CC1
CC2
FOK
EFM
ASY
DFCT
MIRR
DGND
SENS
CUOT
XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
AUTO ASY CONTRL AMP
FOK AMP
LEVEL SHIFT
IIL → TTL
TTL ↓ IIL
DATA
XLT
CLK
LOCK
DIRC
CB
CP
RFI
RFO
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
AVEE
DVEE
TZC
COMPARATOR
FS1-4
TG1, 2
TM1-7
PS1-3
SSTOP
TE
DFCT
TG1 T. GAIN UP/DOWN
TRACKING PHASE COMPEN-SATION
I SET
ISET
F SET
FSET
TDFCT
TM1 T. SERVO ON/OFF
ATSC
B. P. F
WINDOW COMPARATOR
TM7 T. BRAKE SERVO ON/CHOP
TM5
FZC
FS1 F. SEARCH UP/DOWN
TM3
TM6
SL-
FS3 F. GAIN DOWN/NORMAL
FE
FOCUS PHASE COMPEN-SATION
TM7
SLED AMP
SLO
TM4
FDFCT
FS4 FOCUS ON/OFF
FS2 F. SEARCH ON/OFF
TG2 T. GAIN UP/DOWN
SL+
FOCUS AMP
TRACKING AMP
TM2 SLED ON/OFF
VC
FGD
FS3
FLB
FEO
FE-
SRCH
TGU
TG2
AVCC
TAO
TA-

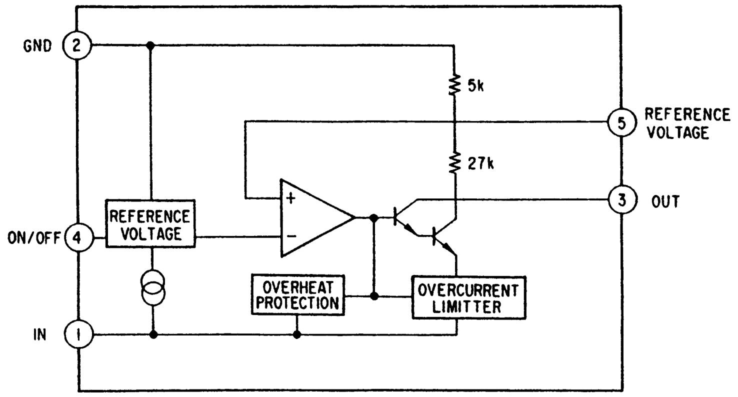
IC103 M54641FP


VCC
VCC
REG
REFERENCE
IN1
INPUT AMP.
POWER AMP.
OUT2
CONTROL
IN2
INPUT AMP.
POWER AMP.
OUT1
GND
N.C.

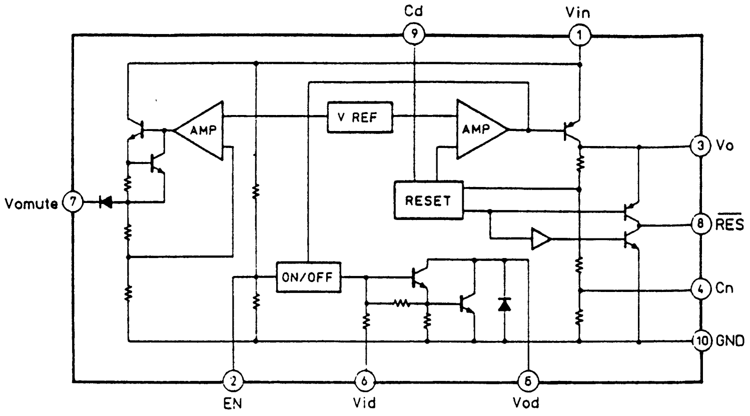
IC201 CXD2500AQ


FOK
FSW
MON
MDP
MDS
LOCK
NC
VCOO
VCOI
TEST
PDO
VSS
NC
NC
NC
VPCO
VCKI
FILO
FILI
PCO
AVSS
CLTV
AVDD
RF
TEST2
TEST3
ASYO
TEST4
NC
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10
DA09
DA08
DA07
DA06
DA05
DA04
DA03
DA02
DA01
APTR
APTL
VSS
XTAI
XTAO
XTSL
FSTT
C4M
C16M
MD2
DOUT
EMPH
WFCK
SCOR
SBSO
EXCK
SQSO
SQCK
MUTE
SENS
XRST
DATA
XLAT
VDD
CLOK
SEIN
CNIN
DATO
XLTO
CLKO
MIRR
ASYMMETRY CORRECTOR
VCO
PLL
CLV
AUTO SEQUENCER
D/A DATA PROCESSOR
RAM
DATA BUS
ADDRESS GENERATOR
ERROR CORRECTOR
CLOCK GENERATOR
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODULATOR

IC502 M5293L


GND 2
5k
REFERENCE VOLTAGE 5
27k
OUT 3
ON/OFF 4
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN 1

IC503 LA5601


Cd 9
Vin 1
AMP
V REF
AMP
Vo 3
RESET
Vomute 7
8 RES
ON/OFF
4 Cn
10 GND
2 EN
6 Vid
6 Vod

3-7. PIN FUNCTION OF IC202 AND IC401

• IC202 CD System Controller (μPD75116GF-760-3BE)

Functions effected by the captioned controller include IC101 (RF signal processing servo) and IC201 (DSP digital filter) loading control in the CD unit, data exchange with IC401 (master controller), audio bus entry, etc.

Pin No.	Pin Name	I/O	Description
1-2		O	Not in use with the model (open).
3	DPCLK	O	Display data transfer clock output to IC401 (display micon)
4-6		O	Not in use with the model (open)
7	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
8	X2	I	Clock input
9	X1	I	Clock input (4 MHz)
10	DPCF SW	O	DEFECT circuit ON/OFF switching output of IC101 (CXA1372Q). It is turned OFF ("H") to focus-search the DISK flaw detection circuit.
11	AMUTE	O	Muting control output. "H": Mute
12	BSOUT	O	Audio bus output
13	AFADJ	I	Test mode input. Various test operations are effected upon "L" after turning ON the POWER.
14	LDON	O	Optical pickup laser diode ON/OFF switching output. "H": ON
15	XLT	O	Serial data latch output to IC201 (CXD2500AQ)
16	CLK	O	Serial data transfer clock output to IC201 (CXD2500AQ)
17	DATA	O	Serial data output to IC201 (CXD2500AQ)
18	MODE	I	Not in use with the model (GND)
19	ADJ	I	Test mode input. Upon "L," GFS checking is disabled while continuously rotating the spindle no matter whether frame synch is issued during PLAY, PAUSE or SEARCH.
20	GFS	I	GFS signal input from IC201 (CXD2500AQ). "L": NG "H": OK
21	FOK	I	Focus OK signal input from IC101 (CXA1372Q). "H": OK
22 - 23		O	Not in use with the model (open)
24	LODOUT	O	Output to rotate M291 (loading motor) in the loading out direction. *1
25	LODIN	O	Output to rotate M291 (loading motor) in the loading in direction. *1
26	Vss	–	Power terminal (GND)
27	$\overline{\text{IN SW}}$	I	S292 (Loading in switch) input
28	$\overline{\text{OUT SW}}$	I	S291 (Loading out switch) input
29	KEY REQ	I	Key data request input from IC401 (display micon)
30	BS IN	I	Audio bus input
31 - 36			Not in use with the model (GND)
37	$\overline{\text{SENS}}$	I	SENS input from IC101 (CXA1372Q) and IC201 (CXD2500AQ)
38	$\overline{\text{TIMER}}$	I	Not in use with the model (pull up)
39	D/F 16BIT	I I	IC201 (CXD2500AQ) digital filter mode setting input. It is fixed at 16 bit, 4Fs with the model (pull up).
40			Not in use with the model (GND)
41	SUBQ	I	Subcode Q data input from IC201 (CXD2500AQ)
42		O	Not in use with the model (open)
43	SQCLK	O	Subcode Q data reading clock output to IC201 (CXD2500AQ)
44	SCOR	I	Subcode synch S0 + S1 detection input from IC201 (CXD2500AQ)
45 - 56		O	Not in use with the model (open)
57	N.C.	I	Not in use with the model (+5V)
58	VDD	–	Power terminal (+5V)
59 - 62	DPDATA3-0	I/O	Key data input and display data output with IC401 (display micon)
63 - 64		O	Not in use with the model (open)

*1 Loading motor control

	IN	OUT	BRAKE
LODOUT ㉔	L	H	H
LODIN ㉕	H	L	H

- **IC401 Display controller (μPD75206GF-716-3BE)**

In charge of displaying the FL tube and keying in, it exchanges data with the IC202 (CD syscon) in 4-bit parallel mode.

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
2 - 11	G1-10	O	Digital output to the FL tube
12 - 15		O	Not in use with the model (open)
16, 17	l, k	O	FL tube segment output
18	VLOAD	–	Power supply for the FL tube controller (builtin) (-32V)
19	VPRE	–	Power supply for the FL tube predriver (-3.5V)
20 - 25	j - e	O	FL tube segment output
26	VDD	–	Power terminal (+5V)
27, 28	d, c	O	FL tube segment output
29, 30	b, a	O	FL tube segment, key scan output
31, 32		I	Not in use with the model (GND)
33	$\overline{\text{TEST}}$	I	Test mode input. "L": Test mode
34	SELECT	I	Not in use with the model (pull up)
35	BSIN	I	Not in use with the model (pull up)
36	DPCLK	I	Display data transfer clock input from IC202 (CD syscon)
37, 38		I	Not in use with the model (pull up)
39		O	Not in use with the model (pull up)
40, 41		O	Not in use with the model (open)
42	KEY REQ	O	Key data request output to IC202 (CD syscon)
43 - 46	DPDATA0-3	I/O	Key data output and display data input with IC202 (CD syscon)
47 - 50	KEY0-3	I	Key data input
51, 52		I	Not in use with the model (pull up)
53, 54		I	Not in use with the model (GND)
55		O	Not in use with the model (open)
56	X1	I	System clock input (4.19 MHz)
57	X2	I	System clock input
58	Vss	–	Power supply terminal (GND)
59		I	Not in use with the model (GND)
60 - 64		O	Not in use with the model (open)

SECTION 4
EXPLODED VIEWS

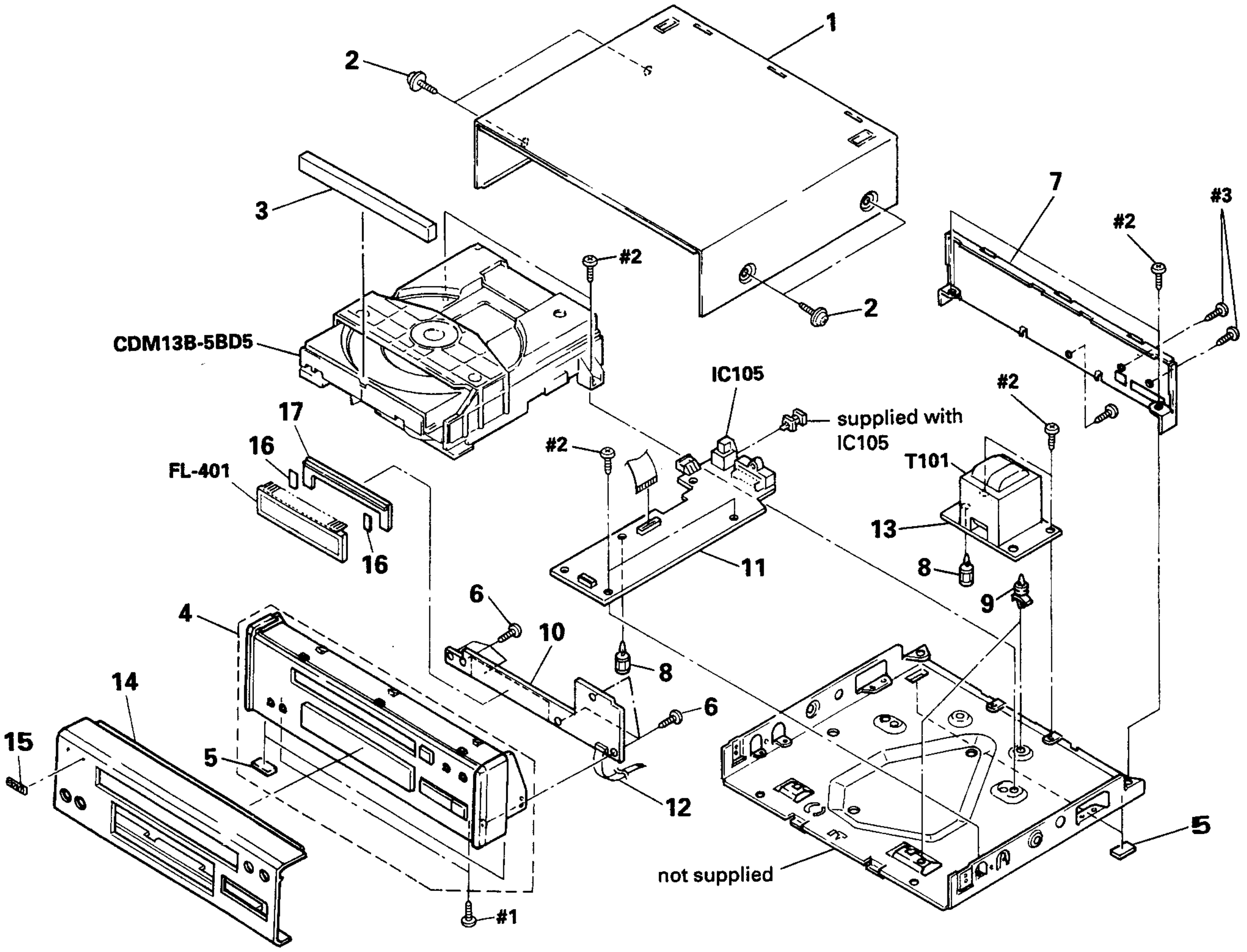
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

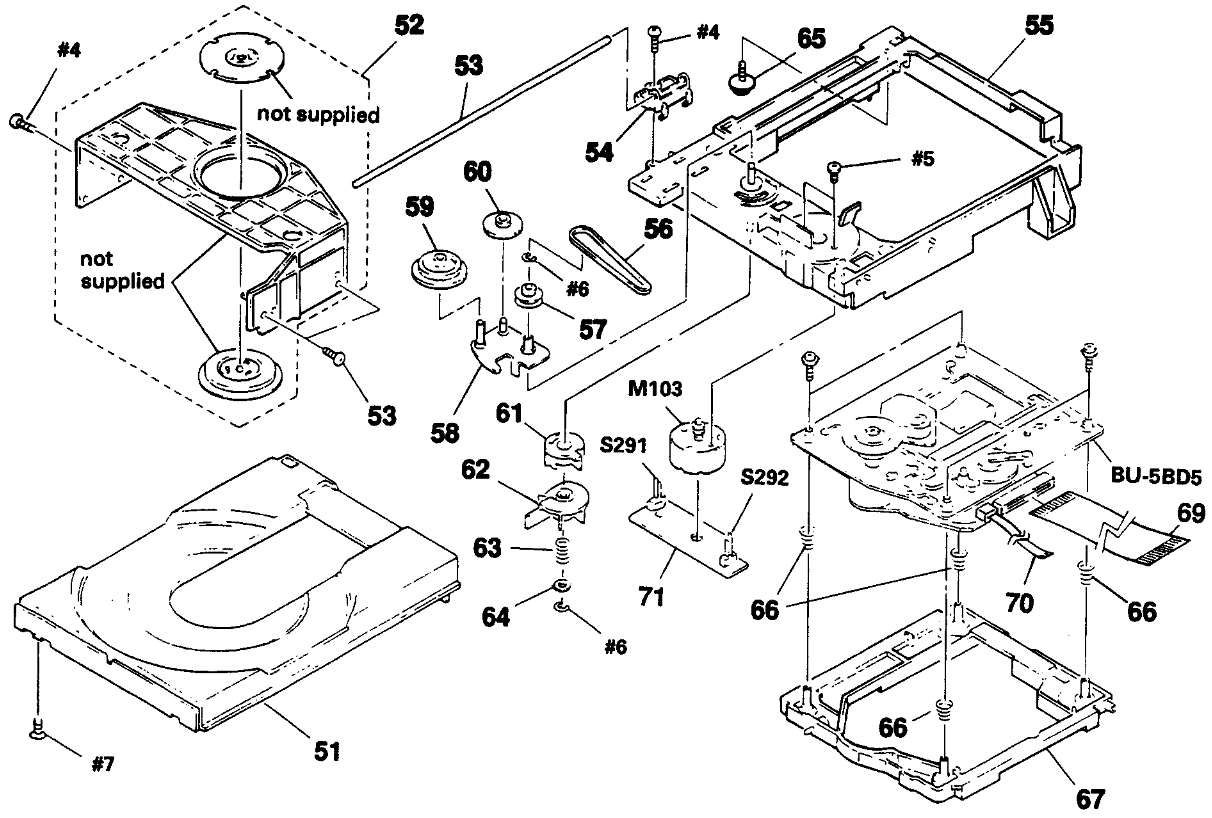
When indicating parts by reference number, please include the board name.

(1) CHASSIS SECTION



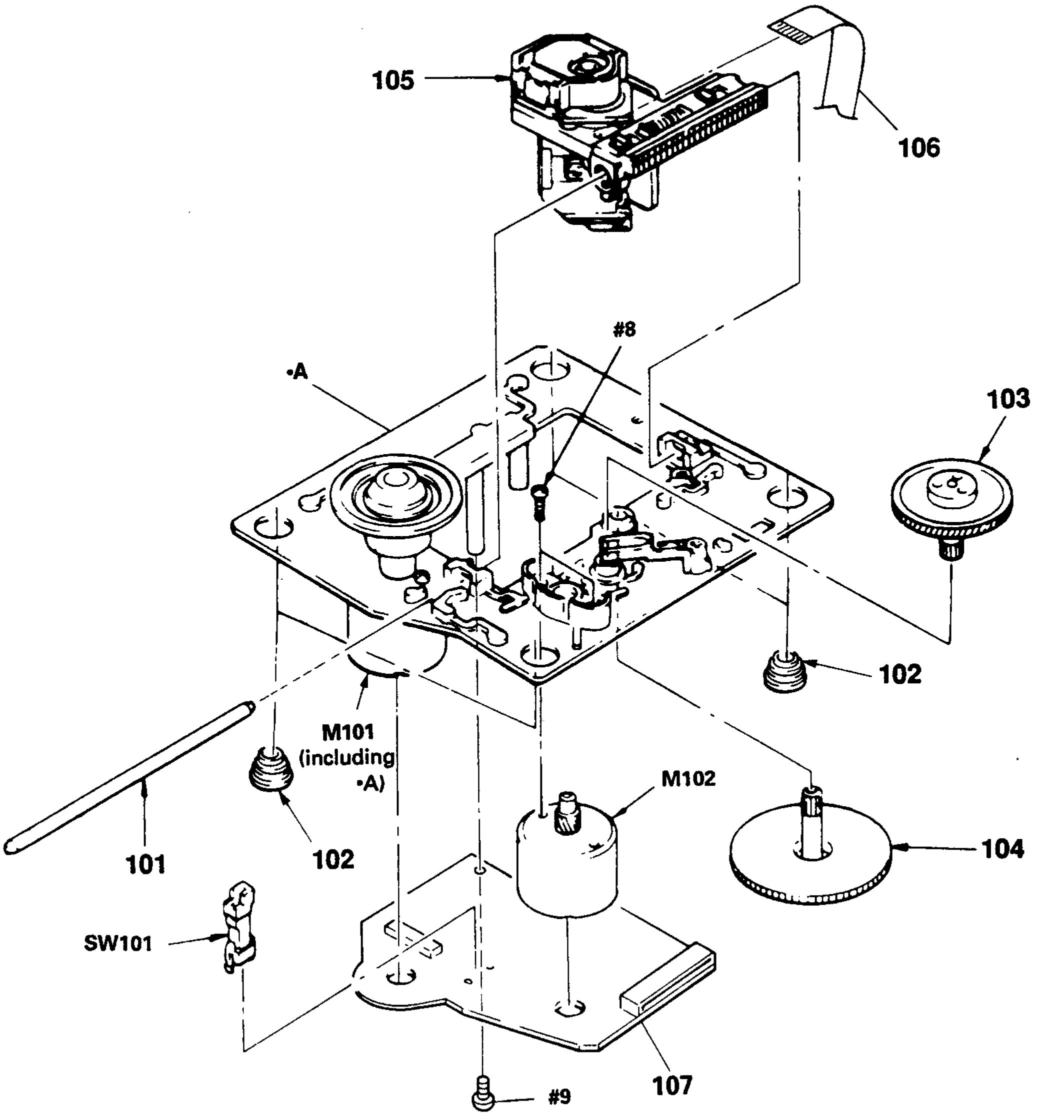
Ref. No.	Part No.	Description	Remarks
1	4-932-844-01	CASE	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4941-527-1	LID (TRAY) ASSY	
4	X-4941-525-1	PANEL ASSY, FRONT	
5	4-930-336-01	FOOT (FELT)	
6	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
7	* 4-943-175-11	PAENL, BACK	
8	* 3-669-610-00	SPACER	
9	* 4-924-098-11	HOLDER, PC BOARD	
10	* A-4617-802-A	DISPLAY BOARD, COMPLETE	
11	* 1-638-264-11	MAIN BOARD	
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	* 1-638-266-11	TRANSFORMER BOARD	
14	4-944-445-01	PANEL, FRONT	
15	4-942-636-01	EMBLEM (NO.3.5), SONY	
16	* 4-932-810-11	CUSHION (FL)	
17	* 4-944-444-01	HOLDER (FL TUBE)	
T101	⚠ 1-450-341-11	TRANSFORMER, POWER	

(2) CD MECHANISM SECTION (CDM13B-5BD5)


52
#4
not supplied
53
#4
54
65
55
#5
60
59
56
not supplied
#6
57
53
58
61
M103
S291
S292
BU-5BD5
69
62
63
71
66
70
66
64
#6
66
67
#7
51

Ref. No.	Part No.	Description	Remarks
51	4-944-012-01	TABLE, DISC	
52	A-4604-752-A	HOLDER (MG) ASSY	
53	4-929-764-01	SHAFT (TABLE GUIDE)	
54	4-944-006-01	BEARING	
55	X-4941-462-1	CHASSIS (MD) ASSY	
56	4-927-649-01	BELT	
57	4-929-724-01	PULLEY (B)	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-11	GEAR (P)	
60	4-927-628-01	GEAR (C)	
61	4-929-727-01	CAM (A)	
62	4-929-729-01	CAM (B)	
63	3-659-338-00	SPRING, COMPRESSION	
64	4-927-654-01	WASHER (LIMITER)	
65	* 4-917-583-21	BRACKET, YOKE	
66	4-917-541-01	SPRING (B)	
67	4-929-747-01	HOLDER (BU)	
68	4-933-134-01	SCREW (+PTPWH M2.6X6)	
69	1-590-909-21	WIRE, FLAT TYPE (19 CORE)	
70	1-590-530-11	WIRE, FLAT TYPE	
71	* 1-638-308-11	LOADING BOARD	
M103	A-4608-362-A	MOTOR (L) ASSY	

(3) OPTICAL PICK-UP BLOCK (BU-5BD5)


105
106
#8
•A
103
102
M101 (including •A)
M102
104
101
102
SW101
#9
107

Ref. No.		Part No.	Description	Remarks
101		4-917-565-01	SHAFT, SLED	
102		4-933-126-01	INSULATOR (A)	
103		4-917-567-01	GEAR (M)	
104		4-917-564-01	GEAR (P), FLATNESS	
105	⚠	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106		1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
107	*	A-4617-762-A	BD BOARD, COMPLETE	
M101		X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102		X-4917-504-1	ASSY, MOTOR (SLED)	
SW101		1-572-085-11	SWITCH, LEAF (LIMIT)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 5
ELECTRICAL PARTS LIST

BD

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF :μF
- COILS
  uH : μH

Ref. No.	Part No.	Description	Remarks
	* A-4617-762-A	BD BOARD, COMPLETE	
		******************	
		(CAPACITOR)	
C101	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C102	1-163-989-11	CERAMIC CHIP 0.033uF 10% 25V	
C103	1-135-155-21	TANTALUM CHIP 4.7uF 10% 10V	
C104	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C105	1-126-607-11	ELECT CHIP 47uF 20% 4V	
C106	1-126-607-11	ELECT CHIP 47uF 20% 4V	
C107	1-126-607-11	ELECT CHIP 47uF 20% 4V	
C108	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C109	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C110	1-163-989-11	CERAMIC CHIP 0.033uF 10% 25V	
C111	1-164-346-11	CERAMIC CHIP 1uF 16V	
C112	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C113	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C114	1-164-695-11	CERAMIC CHIP 0.0022uF 5% 50V	
C115	1-164-695-11	CERAMIC CHIP 0.0022uF 5% 50V	
C117	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C118	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C119	1-164-695-11	CERAMIC CHIP 0.0022uF 5% 50V	
C120	1-163-989-11	CERAMIC CHIP 0.033uF 10% 25V	
C151	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
C152	1-164-346-11	CERAMIC CHIP 1uF 16V	
C153	1-163-135-00	CERAMIC CHIP 560PF 5% 50V	
C154	1-164-695-11	CERAMIC CHIP 0.0022uF 5% 50V	
C155	1-163-023-00	CERAMIC CHIP 0.015uF 5% 50V	
C171	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C172	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C173	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C174	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C201	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C202	1-163-145-00	CERAMIC CHIP 0.0015uF 5% 50V	
C203	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C204	1-164-346-11	CERAMIC CHIP 1uF 16V	
C205	1-164-346-11	CERAMIC CHIP 1uF 16V	
C206	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C207	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C208	1-164-346-11	CERAMIC CHIP 1uF 16V	
C209	1-164-346-11	CERAMIC CHIP 1uF 16V	
C210	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
		(CONNECTOR)	
CN101	1-580-858-11	SOCKET, CONNECTOR (SMT) 5P	
CN102	1-580-866-11	SOCKET, CONNECTOR (SMT) 12P	
CN103	1-580-872-41	SOCKET, CONNECTOR (SMT) 19P	
		(DIODE)	
D101	8-719-976-96	DIODE DTZ4.7B	
D201	8-719-988-62	DIODE 1SS355	
		(IC)	
IC101	8-752-050-82	IC CXA1372Q	
IC102	8-759-823-48	IC LA6525M	
IC103	8-759-636-20	IC M54641FP	
IC201	8-752-337-26	IC CXD2500AQ	
IC202	8-759-153-16	IC uPD75116GF-760-3BE	
		(TRANSISTOR)	
Q101	8-729-805-45	TRANSISTOR 2SC3395	
Q201	8-729-602-21	TRANSISTOR 2SC4154-F	
		(RESISTOR)	
R101	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R102	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R103	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R104	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R105	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R106	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R107	1-216-114-00	METAL GLAZE 510K 5% 1/10W	
R108	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R109	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R110	1-216-049-00	METAL CHIP 1K 5% 1/10W	

DISPLAY MAIN TRANSFORMER LOADING

(IC)

Ref. No.	Part No.	Description	Remarks
IC401	8-759-154-14	IC uPD75206GF-716-3BE	
IC501	8-759-604-86	IC M5F7807L	
IC502	8-759-633-42	IC M5293L	
IC503	8-759-821-93	IC LA5601	
IC504	8-749-922-39	IC GP1F34T	

(JUMPER)

Ref. No.	Part No.	Description	Remarks
JW401	1-216-295-00	METAL CHIP 0 5% 1/10W	

(TRANSISTOR)

Ref. No.	Part No.	Description	Remarks
Q501	8-729-805-69	TRANSISTOR 2SA1341	
Q502	8-729-620-06	TRANSISTOR 2SC3052EF	

(RESISTOR)

Ref. No.	Part No.	Description	Remarks
R401	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R402	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R403	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R404	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R405	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R406	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R407	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R408	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R409	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R410	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R411	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R412	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R413	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R501	1-216-001-00	METAL CHIP 10 5% 1/10W	
R502	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R503	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R504	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R520	1-249-429-11	CARBON 10K 5% 1/4W	

(SWITCH)

Ref. No.	Part No.	Description	Remarks
S401	1-572-184-11	SWITCH, KEYBOARD (◀◀ |◁◁)	
S402	1-572-184-11	SWITCH, KEYBOARD (▶▶ ▷▷|)	
S403	1-572-184-11	SWITCH, KEYBOARD (▷‖)	
S404	1-572-184-11	SWITCH, KEYBOARD (■)	
S405	1-572-184-11	SWITCH, KEYBOARD (OPEN/CLOSE ⏏)	
S406	1-572-184-11	SWITCH, KEYBOARD (EDIT)	
S407	1-572-184-11	SWITCH, KEYBOARD (CHECK)	

(TRANSFORMER)

Ref. No.	Part No.	Description	Remarks
T101	⚠ 1-450-341-11	TRANSFORMER, POWER	

(CRYSTAL)

Ref. No.	Part No.	Description	Remarks
X401	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

* * *

Ref. No.	Part No.	Description	Remarks
	* 1-638-308-11	LOADING BOARD	

(CONNECTOR)

Ref. No.	Part No.	Description	Remarks
CN201	1-580-918-11	HOUSING, CONNECTOR 5P	

(SWITCH)

Ref. No.	Part No.	Description	Remarks
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

* * *

MISCELLANEOUS

Ref. No.	Part No.	Description	Remarks
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
69	1-590-909-21	WIRE, FLAT TYPE (19 CORE)	
70	1-590-530-11	WIRE, FLAT TYPE	
105	⚠ 8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	ASSY, MOTOR (SPINDLE)	
M102	X-4917-504-1	ASSY, MOTOR (SLED)	
M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)	

* * *

ACCESSORY & PACKING MATERIAL

Ref. No.	Part No.	Description	Remarks
	4-920-941-01	SHEET (B), PROTECTION	
	* 4-941-548-01	LABEL, CLASS 1	
	* 4-945-079-01	CUSHION	

* * *

HARDWARE LIST

Ref. No.	Part No.	Description	Remarks
# 1	7-682-547-09	SCREW +BVTT 3X6 (S)	
# 2	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
# 4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
# 5	7-621-775-10	SCREW +B 2.6X4	
# 6	7-624-105-04	STOP RING 2.3, TYPE -E	
# 7	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT	
# 8	7-621-255-15	SCREW +P 2X3	
# 9	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#10	7-682-548-04	SCREW +BVTT 3X8 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

BD DISPLAY MAIN TRANSFORMER

Ref. No.	Part No.	Description	Remarks
R111	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R112	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R113	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R114	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R152	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R153	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R154	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R155	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R156	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R157	1-236-427-11	NETWORK, RES 18K	
R159	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R160	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R171	1-216-001-00	METAL CHIP 10 5% 1/10W	
R172	1-216-001-00	METAL CHIP 10 5% 1/10W	
R173	1-216-001-00	METAL CHIP 10 5% 1/10W	
R174	1-216-001-00	METAL CHIP 10 5% 1/10W	
R201	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R202	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R203	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R204	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R205	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R208	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R209	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R210	1-236-427-11	NETWORK, RES 18K	
R212	1-236-427-11	NETWORK, RES 18K	
R214	1-239-039-11	NETWORK, RES 22K	
R218	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R219	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R220	1-216-001-00	METAL CHIP 10 5% 1/10W	
R222	1-236-427-11	NETWORK, RES 18K	
R223	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R224	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R225	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R226	1-216-081-00	METAL CHIP 22K 5% 1/10W	

(VARIABLE RESISTOR)

Ref. No.	Part No.	Description	Remarks
RV101	1-241-395-11	RES, ADJ, METAL GLAZE 10K	
RV102	1-241-395-11	RES, ADJ, METAL GLAZE 10K	

(SWITCH)

Ref. No.	Part No.	Description	Remarks
SW101	1-572-085-11	SWITCH, LEAF (LIMIT)	

(CRYSTAL)

Ref. No.	Part No.	Description	Remarks
X201	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)	
X202	1-579-216-11	VIBRATOR, CERAMIC (4MHz)	

****

Ref. No.	Part No.	Description	Remarks
	* A-4617-802-A	DISPLAY BOARD, COMPLETE ***********************	
	* 1-638-264-11	MAIN BOARD **********	
	* 1-638-266-11	TRANSFORMER BOARD *****************	
	* 1-573-099-11	HOUSING, CONNECTOR 12P	
	* 4-880-403-11	HEAT SINK	
	* 4-932-810-11	CUSHION (FL)	

(CAPACITOR)

Ref. No.	Part No.	Description	Remarks
C115	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C116	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C401	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C402	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C403	1-164-346-11	CERAMIC CHIP 1uF 16V	
C404	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C501	1-126-939-11	ELECT 10000uF 20% 16V	
C502	1-124-907-11	ELECT 10uF 20% 50V	
C503	1-124-903-11	ELECT 1uF 20% 50V	
C504	1-164-346-11	CERAMIC CHIP 1uF 16V	
C505	1-126-063-11	ELECT 100uF 20% 63V	
C506	1-124-907-11	ELECT 10uF 20% 50V	
C507	1-124-903-11	ELECT 1uF 20% 50V	
C510	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C513	1-136-165-00	FILM 0.1uF 5% 50V	
C521	1-126-176-11	ELECT 220uF 20% 10V	
C522	1-124-927-11	ELECT 4.7uF 20% 50V	
C524	1-136-165-00	FILM 0.1uF 5% 50V	

(CONNECTOR)

Ref. No.	Part No.	Description	Remarks
CN401	* 1-573-098-11	HOUSING, CONNECTOR 12P	
CN501	* 1-569-624-11	SOCKET, CONNECTOR 17P	
CN502	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P	
CN601	* 1-573-149-11	SOCKET, CONNECTOR 19P	
CN901	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P	

(DIODE)

Ref. No.	Part No.	Description	Remarks
D401	8-719-106-36	DIODE RD8.2M-B3	
D402	8-719-104-34	DIODE 1S2836	
D403	8-719-104-34	DIODE 1S2836	
D501	8-719-210-39	DIODE EC10QS-04	
D502	8-719-210-39	DIODE EC10QS-04	
D503	8-719-210-33	DIODE EC10DS2	
D505	8-719-106-17	DIODE RD6.8M-B2	
D510	8-719-104-34	DIODE 1S2836	

(FLUORESCENT TUBE)

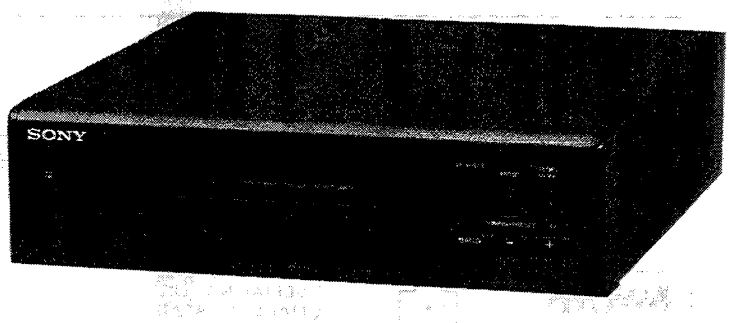
Ref. No.	Part No.	Description	Remarks
FL401	1-519-652-11	INDICATOR TUBE, FLUORESCENT	

When indicating parts by reference number, please include the board name.

ST-H3600/H6600

SERVICE MANUAL

AEP Model
UK Model



ST-H3600 and ST-H6600 are the tuner section in MHC-2600/3600 and MHC-5600/6600 respectively.

Photo : ST-H6600

SPECIFICATIONS

System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 — 108 MHz
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	For AEP, UK models MW: 531 — 1,602 kHz LW: 153 — 279 kHz For Italian model MW: 522 — 1,611 kHz LW: 144 — 288 kHz
Antenna	AM loop antenna. External antenna terminals
Intermediate frequency	450 kHz

Note :
G : Germany model
IT : Italian model

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   - Radio 6

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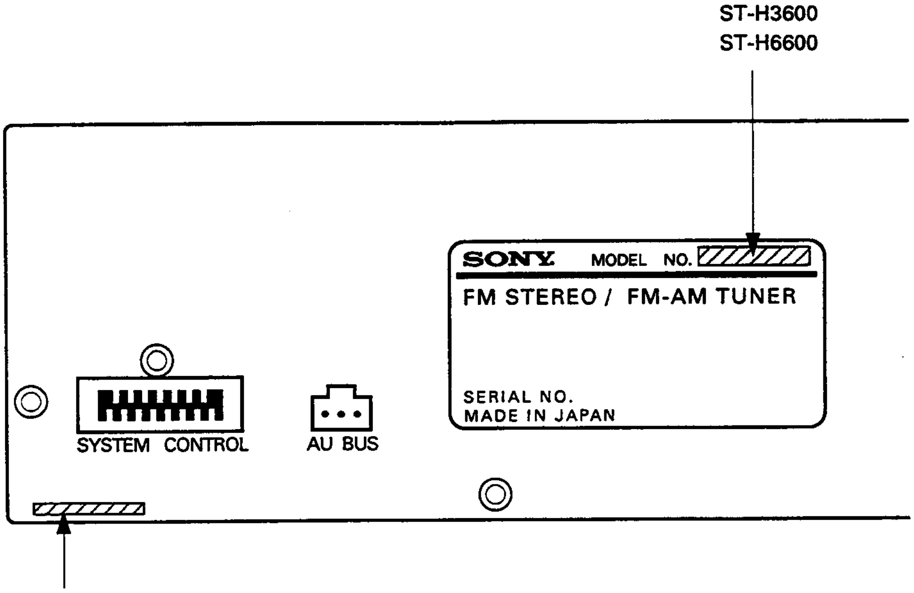
FM STEREO/FM-AM TUNER

SONY®

MODEL IDENTIFICATION

- BACK PANEL -


ST-H3600
ST-H6600
SONY MODEL NO.
FM STEREO / FM-AM TUNER
SERIAL NO.
MADE IN JAPAN
SYSTEM CONTROL
AU BUS

4-942-893-51.	AE	ST-H3600	AEP,UK model
4-942-893-81.	AE4	ST-H3600	G model
4-942-893-91.	IT	ST-H3600	IT model
4-942-893-01.	AE	ST-H6600	AEP model
4-942-893-31.	AE4	ST-H6600	G model
4-942-893-41.	IT	ST-H6600	IT model

SECTION 1
SERVICING NOTES

SUPPLY OF POWER DURING SERVICES

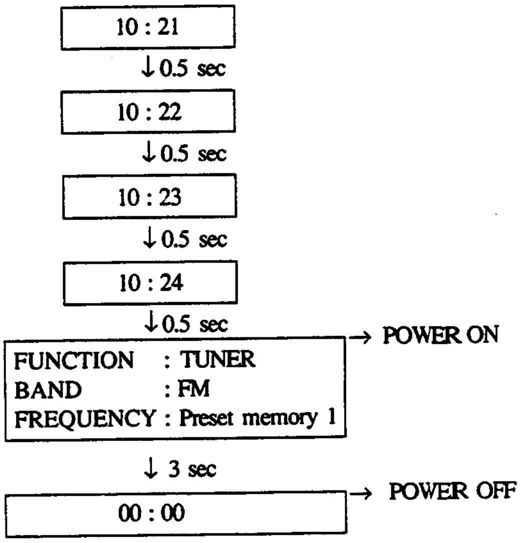
Because the equipment is not provided with any power supply, it is operated with power supplied from the amplifier TA-H2600, H3600, H5600 or H6600 used in the series. The equipment requires the following 4 types of voltages. Therefore, connect the equipment to TA-H2600, H3600, H5600 or H6600 for services such as repairing with power supplied, because it will be too complicated to supply these voltages individually.

VOLTAGE	MAJOR CIRCUIT IN USE
AC 3.9V	FL tube filament voltage (VF)
DC -24V	Display controller IC701 grid voltage (VG)
DC -5.6V	Display controller IC701, Tuner PLL IC81 Vcc
DC 12V	Tuner RF, FM/AM DET IC21 Vcc

SERVICE MODE TO CHECK TIMER ON-OFF

It is possible to check whether the timer normally functions while being connected with an amplifier.

(1) Connect the equipment to the amplifier TA-H2600, H3600, H5600 or H6600 and set the POWER switch to STANDBY state.
(2) Set the time of the tuner to any time.
(3) Press 3 switches "BAND","-" and "MEMORY/NEXT" at the same time (while pressing "BAND" and "-" beforehand, finally press "MEMORY/NEXT")
(4) FL display tube



(5) Completion

Note : After completion of the checking above, data preset in the memory IC702 is erased while resetting the memory to the following state upon shipping from the works, so be sure to recover the same frequency as that before the repairing.

- **Frequencies initially preset**

	AEP/UK model			G/IT model		
	FM	MW	LW	FM	MW	LW
1	87.5MHz	531KHz	153KHz	87.5MHz	522KHz	144KHz
2	88.0MHz	603KHz	162KHz	88.0MHz	603KHz	162KHz
3	98.0MHz	999KHz	216KHz	98.0MHz	999KHz	216KHz
4	100.0MHz	1404KHz	270KHz	100.0MHz	1404KHz	270KHz
5	108.0MHz	1602KHz	279KHz	108.0MHz	1611KHz	288KHz
6 - 20	*1	*2	*2	*1	*2	*2

*1 The same frequency values are set for the preset memory No.6 - No.10, No.11 - No.15 and No.16 - No.20 as for No.1 - No.5 respectively.

*2 The same frequency values are set for the preset menory No.6 -No.10 as for No.1 - No.5.

SERVICE MODE TO CHECK FL TUBE AND KEY INPUT

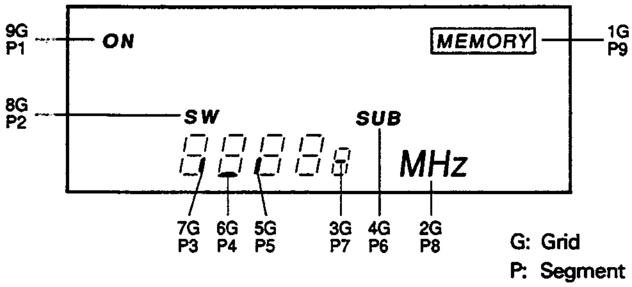
It is possible to check FL tube all ON grid, segment and key input.

(1) Connect the equipment to the amplifier TA-H2600, H3600, H5600 or H6600 and remove the AC cord of the amplifier out of the AC receptacle.

(2) While pressing 3 switches "BAND","-" and "MEMORY/NEXT" at the same time, insert the AC cord of the amplifier into the receptacle.

(3) Thus, all FL display tubes light up. By pressing "+" or "TIMER CONTROL" in this state, partial lighting or key input checking, respectively, is effected.

Partial lighting: Indicates the mode to check complete connection between the grid and segment of the FL tube. The condition is normal when the following indication is effected. By pressing "+" or "-" in the partial lighting mode, the status returns to key input checking or all ON in (3), respectively.



Key input checking: Shows the mode to check key input into 9 keys on the front panel. "0" is indicated at first and, every time a different key is pressed, indicated number is increased. After completion of pressing all 9 keys, "PASS" is indicated. (Once a key is pressed, pressing it again is rejected.)

(4) After the completion of the checking, the equipment recovers normal operation by once removing the AC cord and inserting it again into the AC receptacle.

HOW TO FORCEFULLY TURN POWER ON

The equipment is not provided with any power switch. Therefore, power ON/OFF is controlled in the amplifier side. However, even without an amplifier, power is supplyable to the equipment according to the following methods provided any type of power is available, e.g. using a special jig or supplying the 4 types of voltages individually.

(When power is supplied from the amplifier, power is turned ON only for the tuner.)

(1) Supply power.

(2) Press 3 switches "STEREO/MONO","-" and "MEMORY/NEXT" at the same time.
(Press "STEREO/MONO" and "-" beforehand, and finally press "MEMORY/NEXT.")

However, when the equipment is started up by the methods above, service modes TIMER ON/OFF and FL tube and key input checking are not operable.

Clock Setting

Setting the Clock

Example: Set to 9:25 in the morning.

1 **Press CLOCK SET.**

2 **Set the hour with the – or + button.**

3 **Press MEMORY/NEXT.**

4 **Set the minute with the – or + button.**

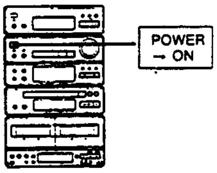
5 **Press MEMORY/NEXT.**
The clock starts operating.

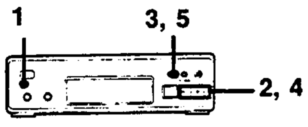
Information on the time

The European and U.K. model shows the time in 24-hour cycle.
The model for other countries shows the time in 12-hour cycle.
AM 12:00 = midnight
PM 12:00 = noon

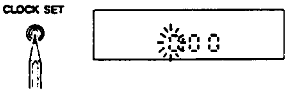
When a power interruption occurs
If the power is recovered within several hours, there is no need to reset the clock, timer, and Wake Up Volume settings. If the power interruption is long, all the above settings are erased, and "0:00" ("AM 12:00") will flash on the display.

To change the frequency display to the time display
Press CLOCK DISP. on the remote commander. Press it again to change to the frequency display.

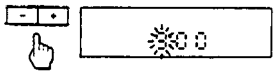




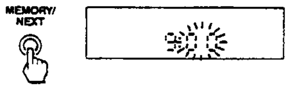
1



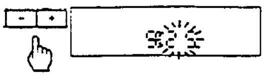
2



3



4



5

MEMORY/
NEXT

Radio

The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

Tuning in Automatically

1 **Press BAND repeatedly until the desired band appears.**
As you press BAND, the band changes as follows:
European and U.K. model:
FM → MW → LW
Model for other countries:
FM → SW → MW

2 **Press MODE so that the TUNING indicator lights up.**

3 **Keep – or + depressed for more than 1 second.**
"AUTO" appears on the display and the unit tunes in a station automatically.

Repeat step 3 until the desired station appears.

Tuning in Manually

1 **Press BAND repeatedly until the desired band appears.**

2 **Press MODE so that the TUNING indicator lights up.**

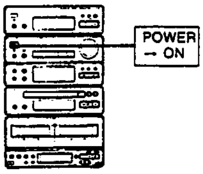
3 **Press – or + repeatedly until the desired station appears.**

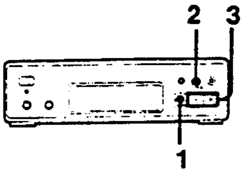
Indicator on the display

TUNED: Appears when a station of sufficient signal strength is tuned in.
STEREO: Appears when an FM stereo program of sufficient signal strength is received.

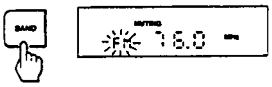
Antenna adjustment A

For MW and LW (SW) reception, find the best location for the supplied AM loop antenna.

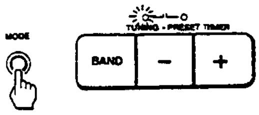




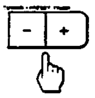
1



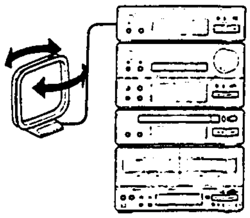
2



3



A



SECTION 2
GENERAL

This section is extracted from instruction manual.

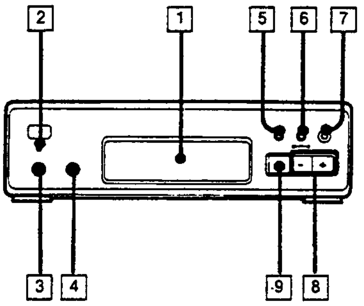
Parts Identification

Refer to the pages indicated in ● for use of the buttons.

Tuner Section A

1 Display window
2 CLOCK SET button ㉔
3 TIMER SELECT button (112)
4 TIMER SET button (112)
5 MEMORY/NEXT button ㉔ (60) (112)
6 MODE button (58) (62)
7 STEREO/MONO (stereo/monaural) button
8 TUNING PRESET/TIMER –/+ buttons
9 BAND selector (58)

A



Radio

Storing Stations

You can store up to 20 FM stations and 10 MW stations and 10 LW (SW) stations in a desired sequence, so that you can tune in the stored station directly by entering the preset station number.
This operation is not possible with the remote commander.

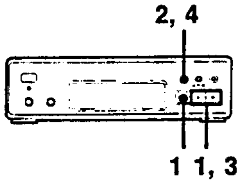
1 Tune in the desired station.

2 Press MEMORY/NEXT.
"MEMORY" and the preset station numbers appear on the display.

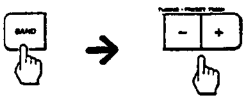
3 While "MEMORY" is on (for several seconds), press – or + to select a desired preset number.

4 Press MEMORY/NEXT.
"MEMORY" disappears, and the station is stored.

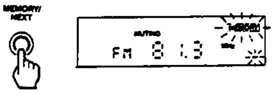
Repeat step 1 to 4 for each station to be stored.



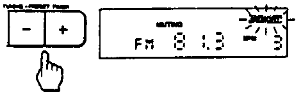
1



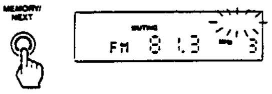
2



3



4



If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on (about 4 seconds).

When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with the steps 3 and 4.

To change the preset station
Store a desired station at the desired preset number by proceeding with the above steps.
The station previously preset will be erased.
Erasing only is not possible.

Radio

To Tune in a Preset Station

Notes:
- When you use the remote commander for the following operations make sure that the display of the remote commander shows "TUNER" If not, press TUNER on the remote commander.
- You cannot operate the buttons on the lid if the lid is open.

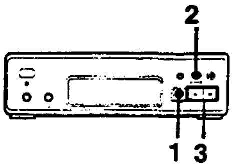
1 Press BAND to select a desired band.

2 Press MODE so that the PRESET indicator lights up.

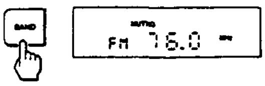
3 Press – or + (◀ or ▶ on the remote commander) to select the desired preset station number.

To tune in a preset station directly

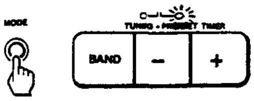
Possible only with the remote commander.
1 Press BAND to select a desired band.
2 Press the numeric buttons to select the desired preset station number.



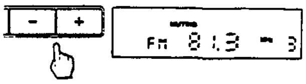
1



2



3



SECTION 3

ELECTRICAL ADJUSTMENTS

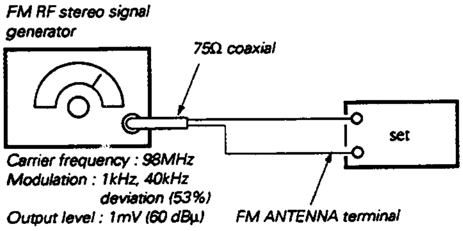
PRECAUTIONS IN REPAIRING

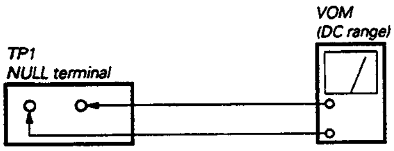
If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

FM SECTION

FM DISCRIMINATOR ALIGNMENT (NULL CHECK)

Setting :


FM RF stereo signal generator
75Ω coaxial
set
Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (53%)
Output level : 1mV (60 dBμ)
FM ANTENNA terminal


VOM (DC range)
TP1 NULL terminal

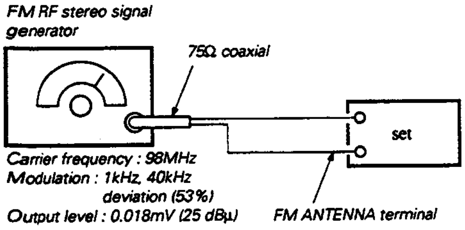
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM TUNING LEVEL adjustment shoud be made after FM discriminator alignment.

FM TUNING LEVEL ADJUSTMENT

Setting :

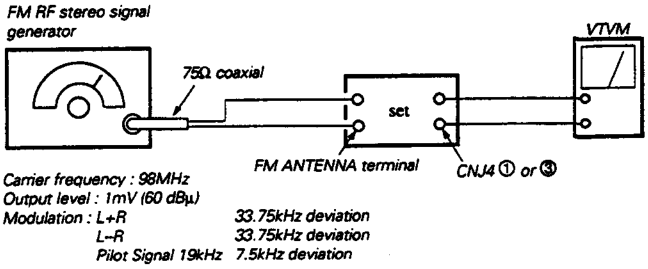

FM RF stereo signal generator
75Ω coaxial
set
Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (53%)
Output level : 0.018mV (25 dBμ)
FM ANTENNA terminal

Procedure :

1. Tune the set to 98MHz.
2. Adjust T24 so that the TUNED LED goes on.

FM STEREO SEPARATION ADJUSTMENT

Setting :


FM RF stereo signal generator
75Ω coaxial
set
VTVM
FM ANTENNA terminal
CNJ4 ① or ③
Carrier frequency : 98MHz
Output level : 1mV (60 dBμ)
Modulation : L+R 33.75kHz deviation
L−R 33.75kHz deviation
Pilot Signal 19kHz 7.5kHz deviation

Procedure :
Tune the set to 98MHz.

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

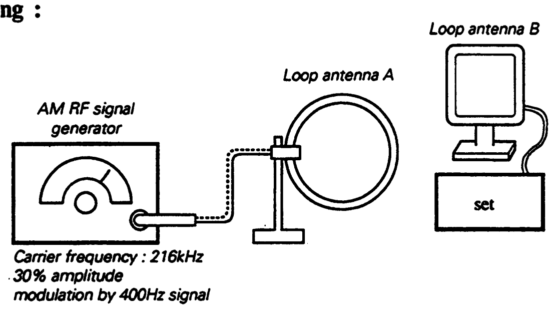
L-CH Stereo separation : Ⓐ − Ⓑ
R-CH Stereo separetion : Ⓒ − Ⓓ

The separations of both channels should be equal.

AM SECTION

AM TUNING LEVEL ADJUSTMENT

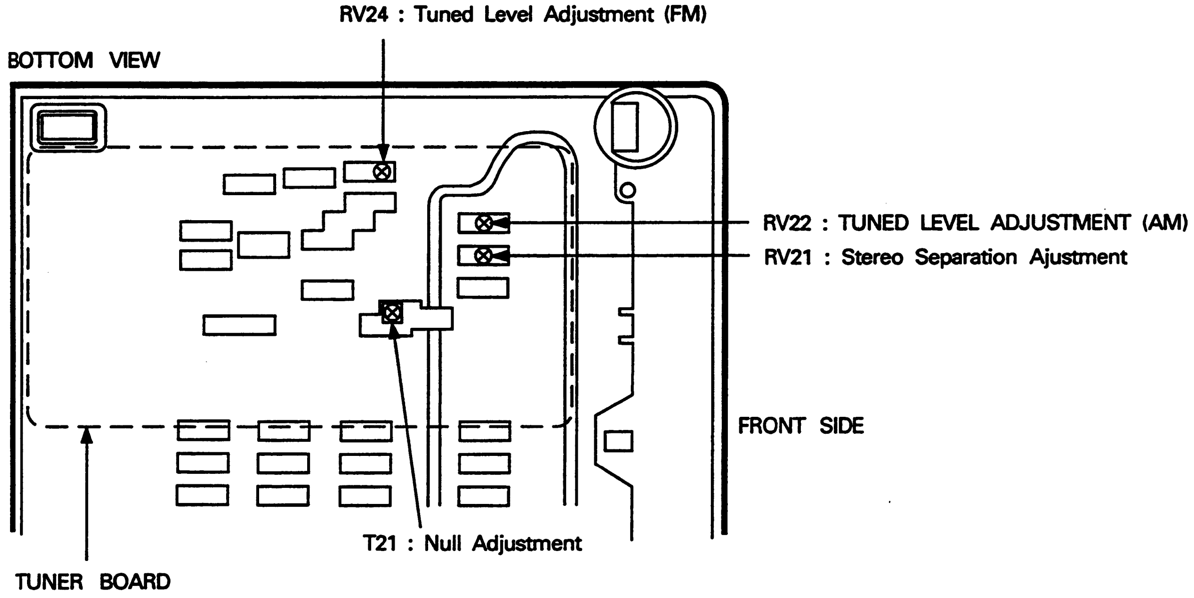
Setting :


Loop antenna B
Loop antenna A
AM RF signal generator
set
Carrier frequency : 216kHz
30% amplitude modulation by 400Hz signal

Procedure :

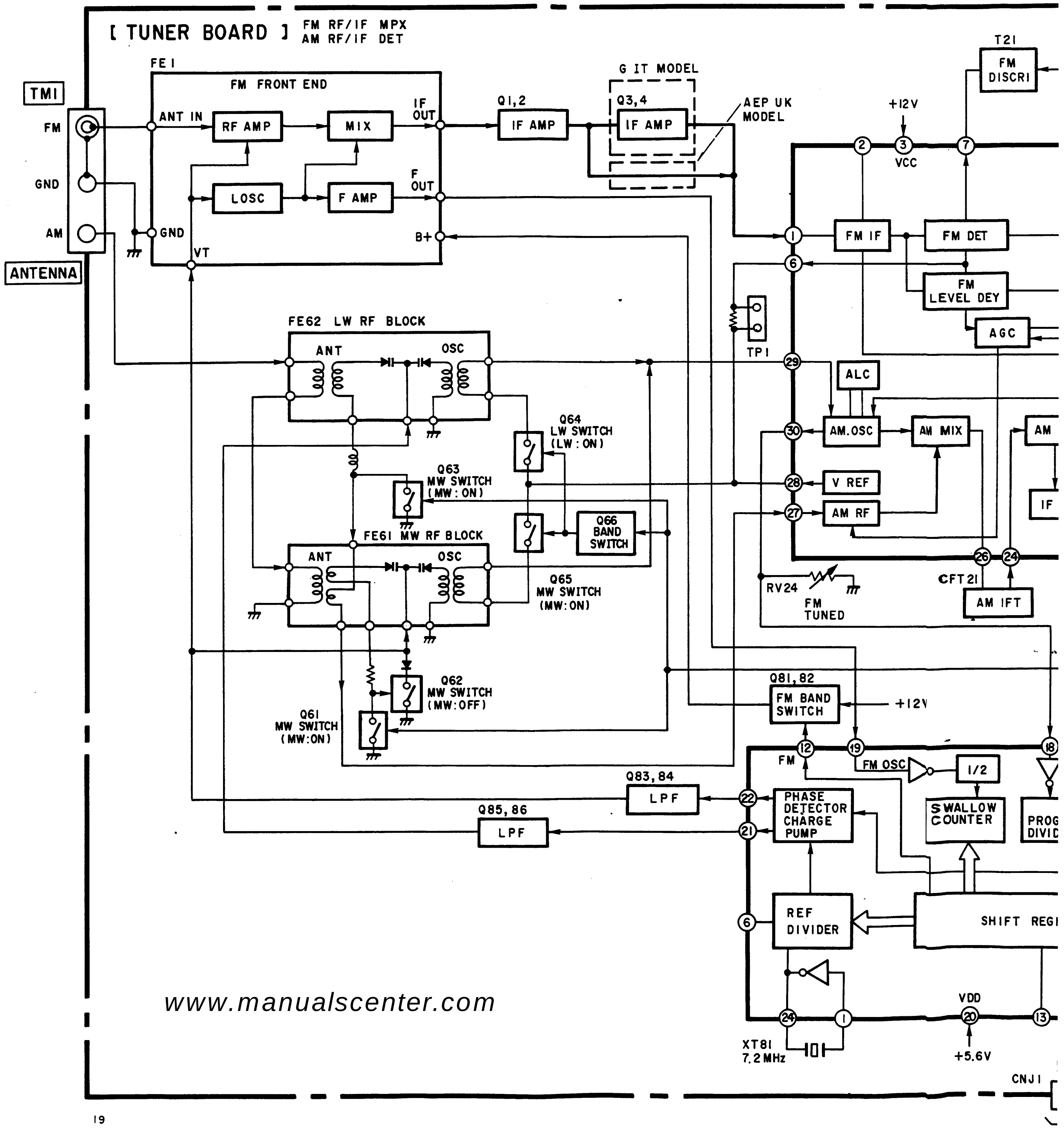
1. Set loop antenna A so that the loop antenna B input level becomes 2.5mV (68dB/m).
2. Tune the set to 216kHz.
3. Adjust the RV22 so that the TUNED LED goes on.

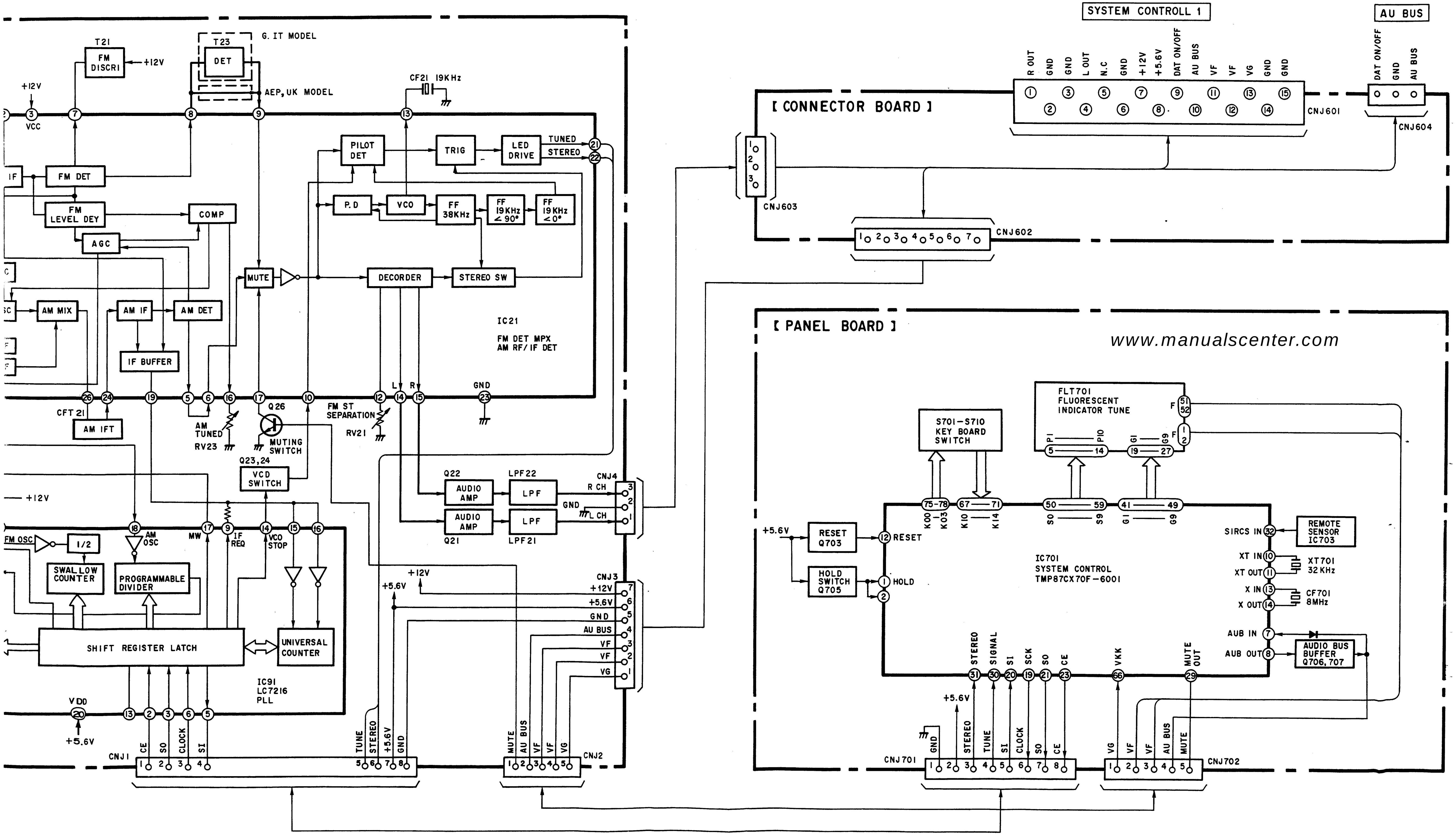
[PARTS ARRANGEMENT DIAGRAM FOR ADJUSTMENT]


RV24 : Tuned Level Adjustment (FM)
BOTTOM VIEW
RV22 : TUNED LEVEL ADJUSTMENT (AM)
RV21 : Stereo Separation Ajustment
FRONT SIDE
T21 : Null Adjustment
TUNER BOARD

SECTION 4
DIAGRAMS

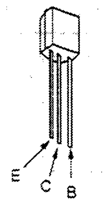
4-1. BLOCK DIAGRAM


[TUNER BOARD]
FM RF/IF MPX
AM RF/IF DET
FE1
FM FRONT END
TM1
FM
GND
AM
ANTENNA
ANT IN
RF AMP
MIX
IF OUT
LOSC
F AMP
F OUT
GND
VT
B+
Q1,2
IF AMP
G IT MODEL
Q3,4
IF AMP
AEP UK MODEL
+12V
VCC
T21
FM DISCRI
FM IF
FM DET
FM LEVEL DEY
AGC
TP1
ALC
AM.OSC
AM MIX
V REF
AM RF
AM
IF
CFT21
AM IFT
RV24
FM TUNED
FE62 LW RF BLOCK
ANT
OSC
Q64 LW SWITCH (LW : ON)
Q63 MW SWITCH (MW : ON)
Q66 BAND SWITCH
FE61 MW RF BLOCK
ANT
OSC
Q65 MW SWITCH (MW:ON)
Q62 MW SWITCH (MW:OFF)
Q61 MW SWITCH (MW:ON)
Q81,82
FM BAND SWITCH
+12V
FM
FM OSC
1/2
Q83,84
LPF
Q85,86
LPF
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER
PROG DIVI
REF DIVIDER
SHIFT REGI
VDD
+5.6V
XT81 7.2MHz
CNJ1
19

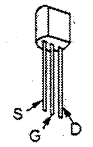

T21
FM DISCRI
+12V
T23
DET
G. IT MODEL
AEP, UK MODEL
+12V
VCC
CF21 19KHz
IF
FM DET
FM LEVEL DEY
COMP
AGC
PILOT DET
TRIG
LED DRIVE
TUNED
STEREO
P.D
VCO
FF 38KHz
FF 19KHz ∠90°
FF 19KHz ∠0°
MUTE
DECORDER
STEREO SW
AM MIX
AM IF
AM DET
IF BUFFER
IC21
FM DET MPX
AM RF/IF DET
CFT21
AM IFT
AM TUNED
RV23
Q26
MUTING SWITCH
FM ST SEPARATION
RV21
L
R
GND
Q23,24
VCD SWITCH
Q22
AUDIO AMP
LPF22
LPF
Q21
LPF21
CNJ4
R CH
GND
L CH
+12V
FM OSC
1/2
AM OSC
MW
IF REQ
VCO STOP
SWALLOW COUNTER
PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IC91
LC7216
PLL
VDD
+5.6V
+12V
+5.6V
CNJ3
+12V
+5.6V
GND
AU BUS
VF
VF
VG
CNJ1
CE
SO
CLOCK
SI
TUNE
STEREO
+5.6V
GND
MUTE
AU BUS
VF
VF
VG
CNJ2
SYSTEM CONTROLL 1
AU BUS
R OUT
GND
GND
L OUT
N.C
GND
+12V
+5.6V
DAT ON/OFF
AU BUS
VF
VF
VG
GND
GND
DAT ON/OFF
GND
AU BUS
[CONNECTOR BOARD]
CNJ601
CNJ604
CNJ603
CNJ602
[PANEL BOARD]
FLT701
FLUORESCENT INDICATOR TUNE
S701–S710
KEY BOARD SWITCH
P1 — P10
G1 — G9
K00–K03
K10–K14
S0 — S9
G1 — G9
+5.6V
RESET Q703
HOLD SWITCH Q705
RESET
HOLD
IC701
SYSTEM CONTROL
TMP87CX70F–6001
SIRCS IN
REMOTE SENSOR IC703
XT IN
XT OUT
XT701 32KHz
X IN
X OUT
CF701 8MHz
AUB IN
AUB OUT
AUDIO BUS BUFFER Q706, 707
STEREO
SIGNAL
SI
SCK
SO
CE
VKK
MUTE OUT
+5.6V
CNJ701
GND
STEREO
TUNE
SI
CLOCK
SO
CE
VG
VF
VF
AU BUS
MUTE
CNJ702

4-2. SEMICONDUCTOR LEAD LAYOUTS

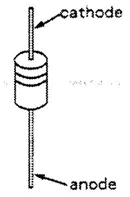
DTA114ES
DTC114ES
2SC2603-EF
2SC2669-OY
2SC3113-AB



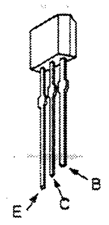
2SK246-GR3



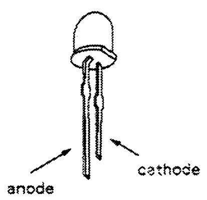
UZ-4.3BSA
1SS120


cathode
anode

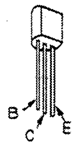
2SA1175-HFE
2SC2785-HFE



SEL2210S-D


anode
cathode

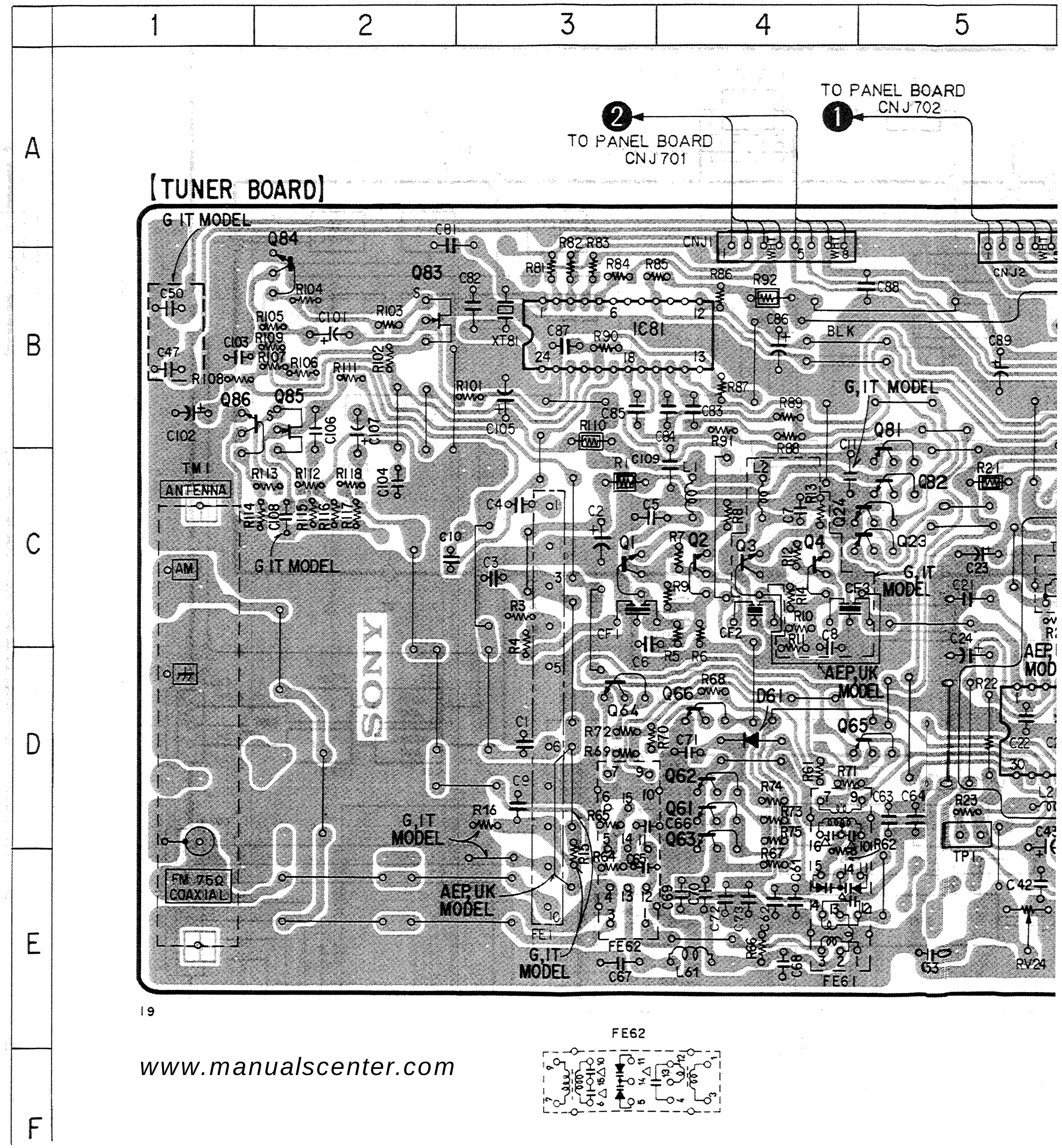
2SA1317-SU
2SC3330-T

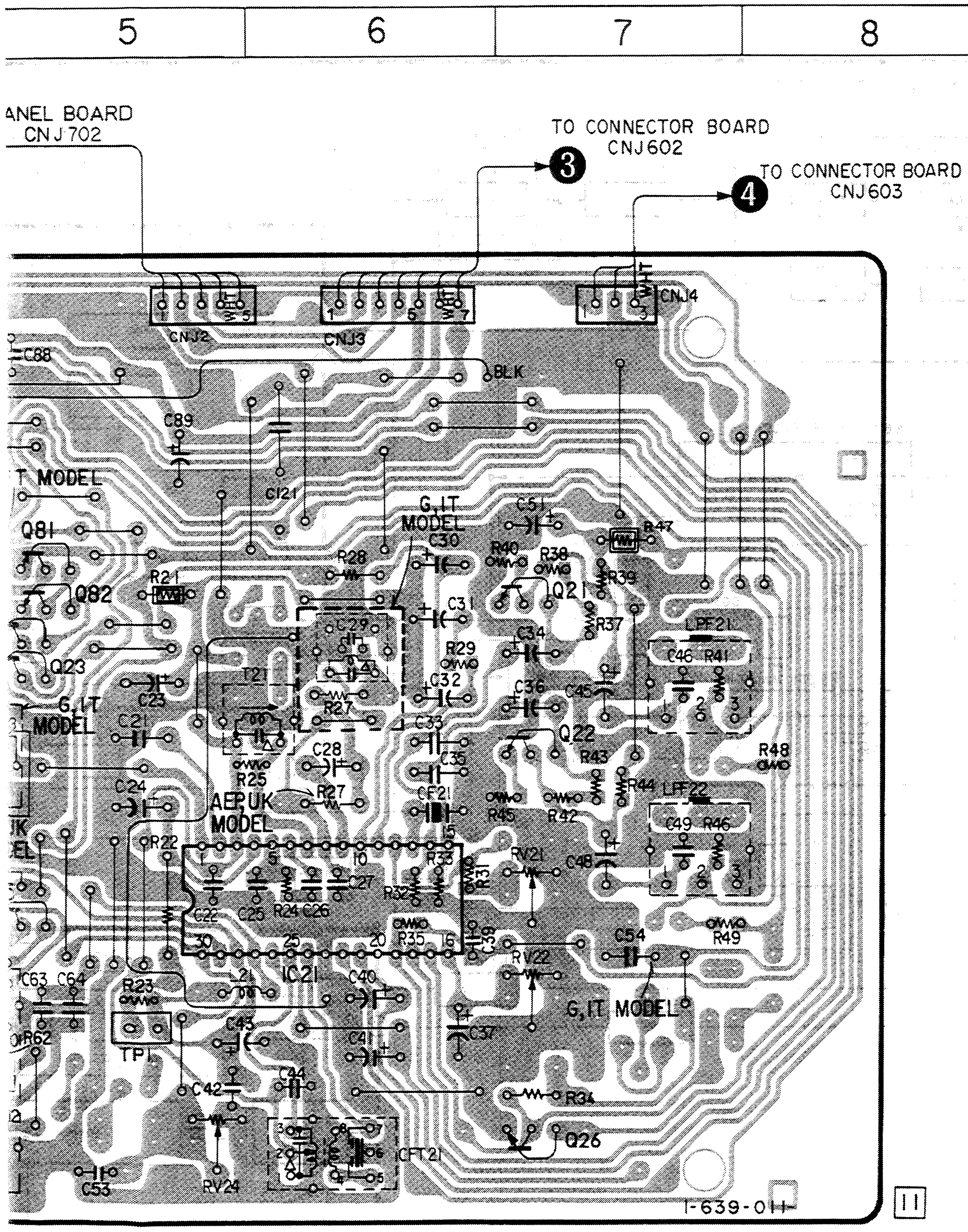


● SEMICONDUCTOR LOCATION

Ref. No	Location	
	H3600	H6600
D61	D – 4	D – 4
D701	G – 4	B – 5
D702	G – 4	B – 2
D707	H – 4	B – 3
D710	G – 2	B – 2
D711	G – 3	B – 3
D712	G – 7	A – 9
D714	G – 9	B – 5
D715	G – 10	B – 9
D716	G – 9	B – 9
D717	G – 8	A – 9
D718	G – 8	B – 2
IC21	C – 5	C – 5
IC81	C – 5	C – 5
IC701	G – 6	B – 6
IC702	G – 9	B – 9
IC703	G – 7	B – 9
Q1	C – 3	C – 3
Q2	C – 4	C – 4
Q3	C – 4	C – 4
Q4	C – 4	C – 4
Q21	C – 7	C – 7
Q22	C – 7	C – 7
Q23	C – 4	C – 4
Q24	C – 4	C – 4
Q26	E – 7	E – 7
Q61	D – 4	D – 4
Q62	D – 4	D – 4
Q63	D – 4	D – 4
Q64	D – 3	D – 3
Q65	D – 5	D – 5
Q66	D – 4	D – 4
Q81	C – 5	C – 5
Q82	C – 5	C – 5
Q701	G – 3	A – 2
Q702	F – 3	A – 2
Q703	G – 8	B – 8
Q705	H – 9	B – 8
Q706	G – 8	B – 9
Q707	G – 9	B – 9

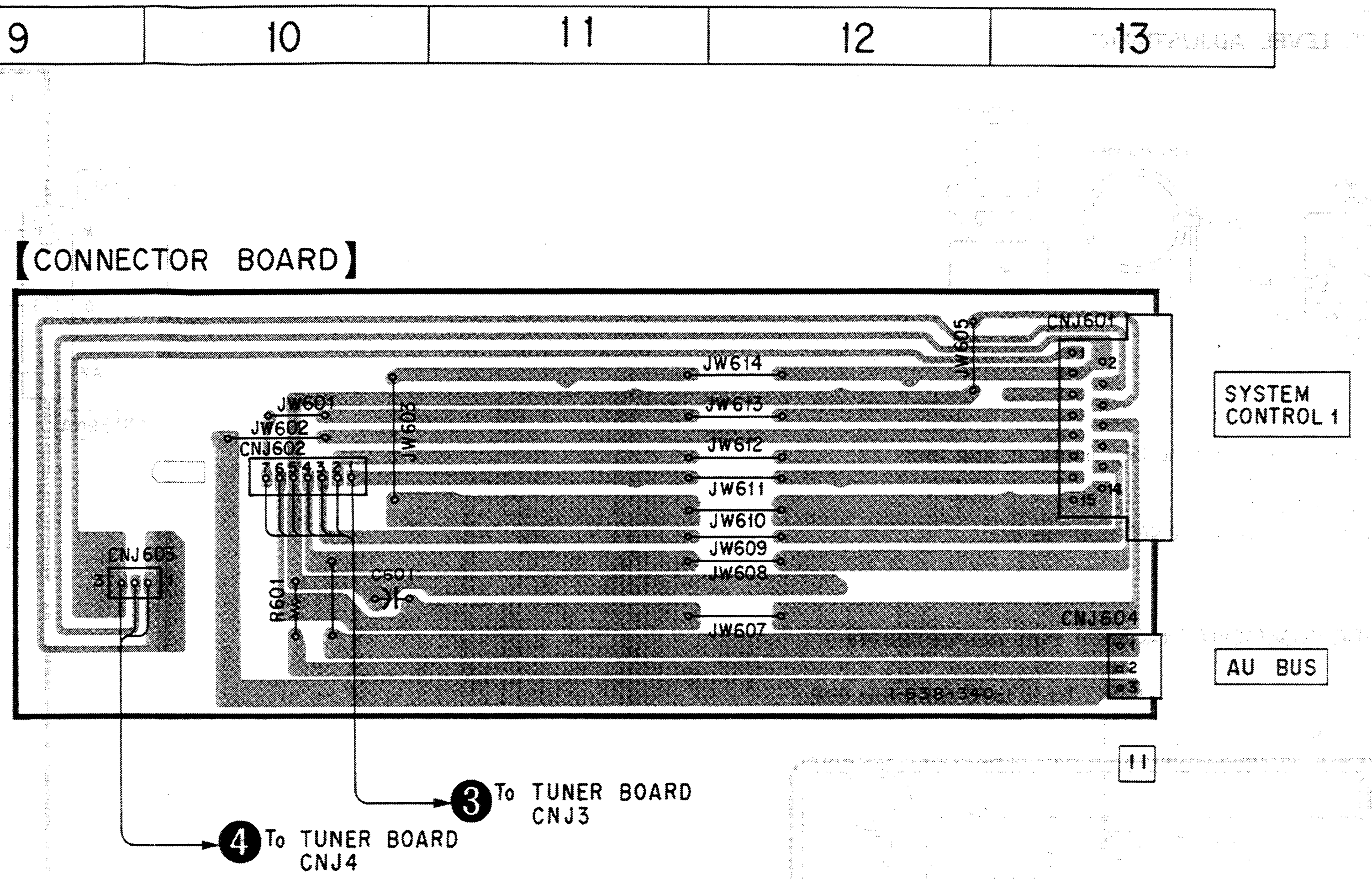
4-3. PRINTED WIRING BOARD – TUNER SECTION –


1
2
3
4
5
A
B
C
D
E
F
TO PANEL BOARD
CNJ702
❶
❷
TO PANEL BOARD
CNJ701
[TUNER BOARD]
G IT MODEL
Q84
Q83
Q86
Q85
IC81
XT81
CNJ1
CNJ2
BLK
G, IT MODEL
Q81
Q82
Q23
Q24
Q1
Q2
Q3
Q4
Q64
Q66
D61
Q65
Q62
Q61
Q63
AEP,UK MODEL
TM1
ANTENNA
AM
FM 75Ω COAXIAL
SONY
G IT MODEL
AEP,UK MODEL
FE1
FE62
FE61
L61
TP1
RV24
19
FE62


5
6
7
8
9
ANEL BOARD CNJ702
TO CONNECTOR BOARD CNJ602
③
TO CONNECTOR BOARD CNJ603
④
CNJ2
CNJ3
CNJ4
BLK
C88
C89
C121
T MODEL
Q81
Q82
R21
Q23
G,IT MODEL
C21
C23
C24
T21
C29
R27
R28
G,IT MODEL
C30
C31
C32
C33
C35
C28
R25
R27
AEPUK MODEL
CF21
C51
R40
R38
Q21
R47
R39
R37
R29
C34
C36
C45
Q22
R43
R44
R45
R42
LPF21
C46
R41
LPF22
C49
R46
R48
R22
C22
C25
R24
C26
C27
R32
R33
R31
R35
C38
RV21
C48
C54
R49
IC21
RV22
G,IT MODEL
C63
C64
R23
R62
TP1
C40
C43
C41
C37
C42
C44
R34
Q26
CFT21
C53
RV24
1-639-011
11

(TCB007-3IJFH/3HJFH)

【CONNECTOR BOARD】


10
11
12
13
CNJ601
SYSTEM CONTROL 1
JW605
JW614
JW613
JW612
JW611
JW610
JW609
JW608
JW607
JW606
JW601
JW602
CNJ602
CNJ603
R601
C601
CNJ604
AU BUS
1-638-340
11
③ To TUNER BOARD CNJ3
④ To TUNER BOARD CNJ4

Note for schematic diagram:

- o—— : indicated a lead wire mounted on the component side.
- ⌐–: indicates side identified with part number.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : internal component.
- ▭ : nonflammable resistor

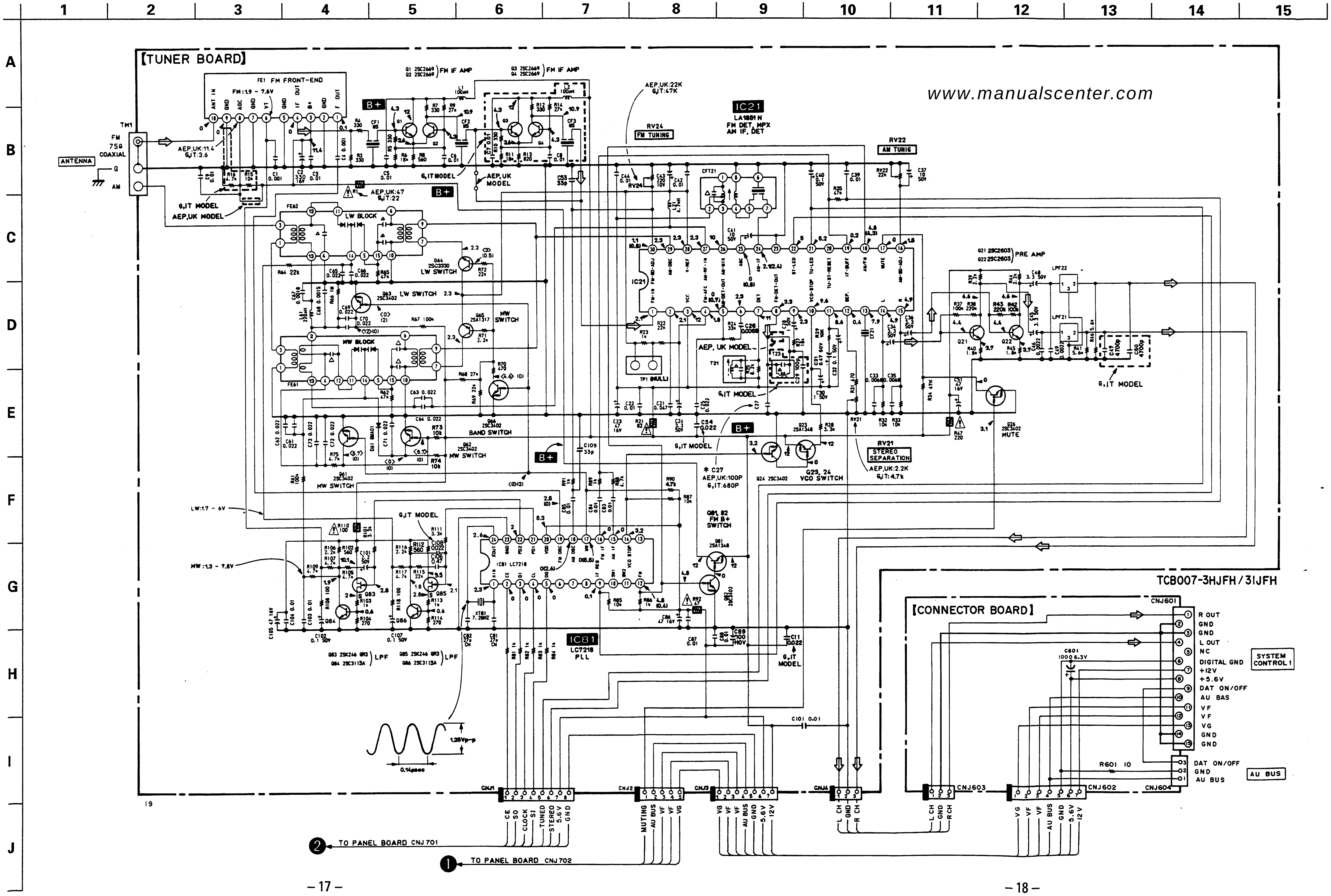
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no -signal (detuned) conditions.

no mark : FM
( ) : MW
< > : LW

- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path
  ⇨ : FM
- G : Germany Model
- IT : Itarian Model

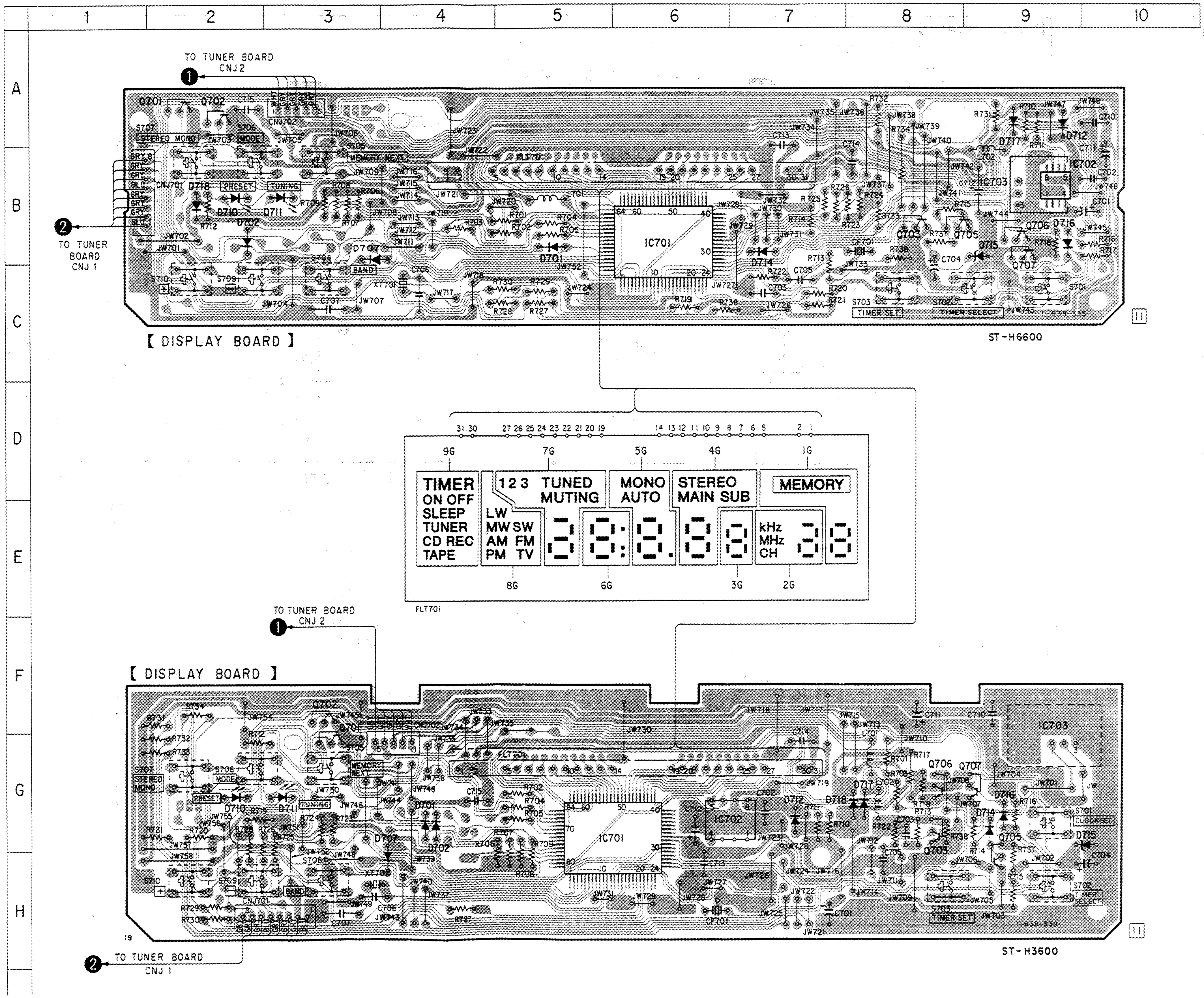
4-4. SCHEMATIC DIAGRAM – TUNER SECTION –



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J
【TUNER BOARD】
FE1 FM FRONT-END
FM:1.9 - 7.6V
TM1
FM 75Ω COAXIAL
ANTENNA
AM
Q1 2SC2669, Q2 2SC2669 FM IF AMP
Q3 2SC2669, Q4 2SC2669 FM IF AMP
B+
AEP,UK:11.4 G,IT:3.6
G,IT MODEL
AEP,UK MODEL
AEP,UK:47 G,IT:22
AEP,UK MODEL
AEP,UK:22K G,IT:47K
RV24 FM TUNING
IC21 LA1851N FM DET, MPX AM IF, DET
RV22 AM TUNING
FE62
LW BLOCK
Q64 2SC3330 LW SWITCH
Q63 2SC3402 LW SWITCH
Q65 2SA1317 MW SWITCH
MW BLOCK
FE61
Q66 2SC3402 BAND SWITCH
Q62 2SC3402 MW SWITCH
Q61 2SC3402 MW SWITCH
Q21 2SC2603, Q22 2SC2603 PRE AMP
LPF22
LPF21
G,IT MODEL
AEP, UK MODEL
T23
T21
TP1 (NULL)
Q26 2SC3402 MUTE
RV21 STEREO SEPARATION
AEP,UK:2.2K G,IT:4.7k
∗ C27 AEP,UK:100P G,IT:680P
Q23 2SA1348
Q24 2SC3402
Q23, 24 VCO SWITCH
Q81, 82 FM B+ SWITCH
Q81 2SA1348
Q82 2SC3402
LW:1.7 - 6V
MW:1.3 - 7.8V
G,IT MODEL
IC81 LC7218
IC81 LC7218 PLL
X81 7.2MHz
Q83 2SK246 GR3, Q84 2SC3113A LPF
Q85 2SK246 GR3, Q86 2SC3113A LPF
1.25Vp-p
0.14μsec
TCB007-3HJFH/3IJFH
【CONNECTOR BOARD】
CNJ601
R OUT
GND
GND
L OUT
NC
DIGITAL GND
+12V
+5.6V
DAT ON/OFF
AU BAS
VF
VF
VG
GND
GND
SYSTEM CONTROL 1
C601 1000 6.3V
R601 10
DAT ON/OFF
GND
AU BUS
AU BUS
CNJ1
CE
SO
CLOCK
SI
TUNED
STEREO
5.6V
GND
CNJ2
MUTING
AU BUS
VF
VF
VG
CNJ3
VG
VF
VF
AU BUS
GND
5.6V
12V
CNJ4
L CH
GND
R CH
CNJ603
L CH
GND
RCH
CNJ602
VG
VF
VF
AU BUS
GND
5.6V
12V
CNJ604
C101 0.01
19
TO PANEL BOARD CNJ701
TO PANEL BOARD CNJ702

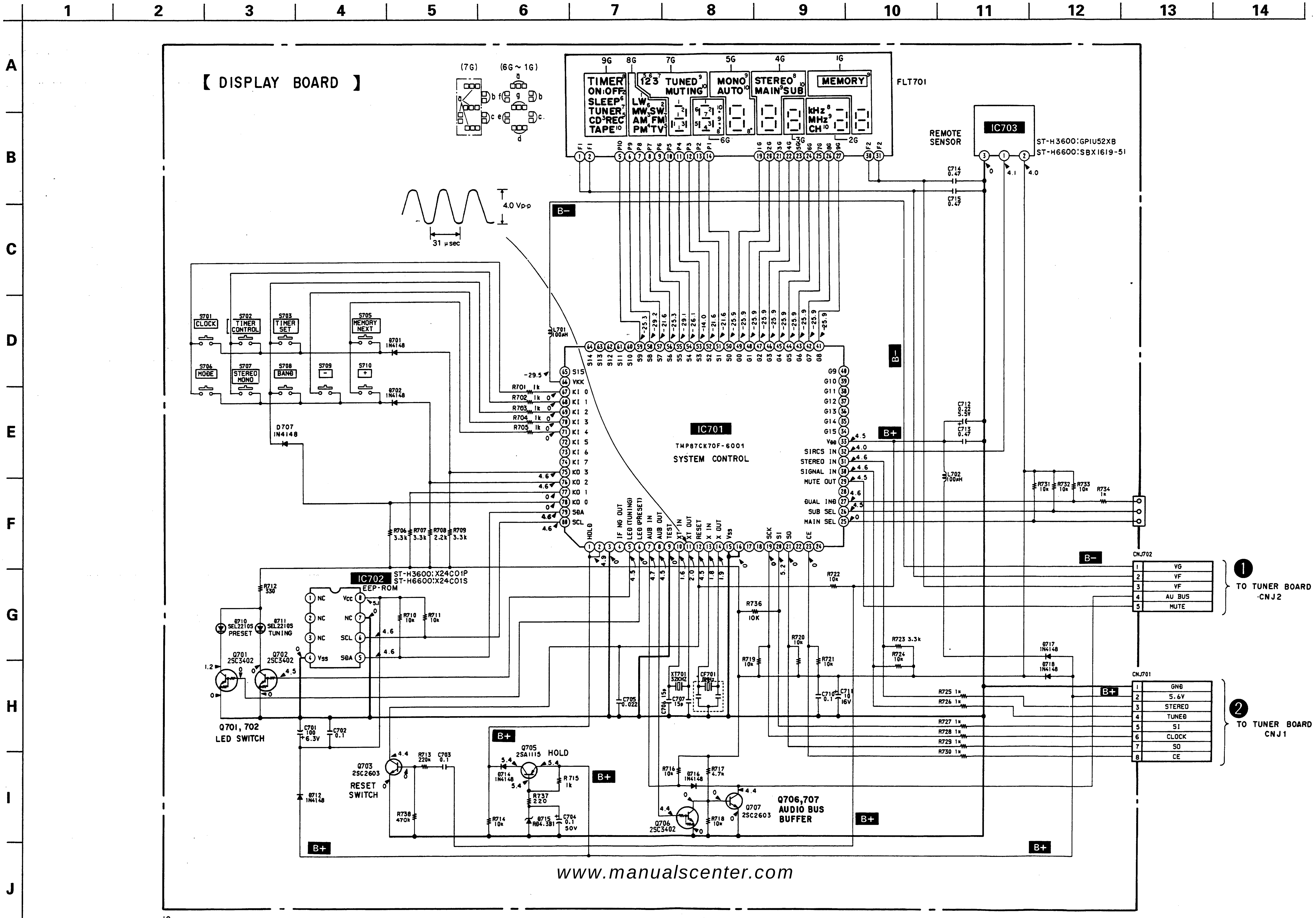
4-5. PRINTED WIRING BOARD – DISPLAY SECTION –

• See page 13 for semiconductor Location.


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
TO TUNER BOARD CNJ2
❶
❷
TO TUNER BOARD CNJ 1
【 DISPLAY BOARD 】
ST-H6600
STEREO MONO
MODE
MEMORY NEXT
PRESET
TUNING
BAND
TIMER SET
TIMER SELECT
CLOCK SET
IC701
IC702
IC703
FLT701
CNJ701
CNJ702
XT701
CF701
31 30 27 26 25 24 23 22 21 20 19 14 13 12 11 10 9 8 7 6 5 2 1
9G
7G
5G
4G
1G
8G
6G
3G
2G
TIMER
ON OFF
SLEEP
TUNER
CD REC
TAPE
LW
MW SW
AM FM
PM TV
1 2 3 TUNED
MUTING
MONO
AUTO
STEREO
MAIN SUB
MEMORY
kHz
MHz
CH
TO TUNER BOARD CNJ 2
TO TUNER BOARD CNJ 1
ST-H3600

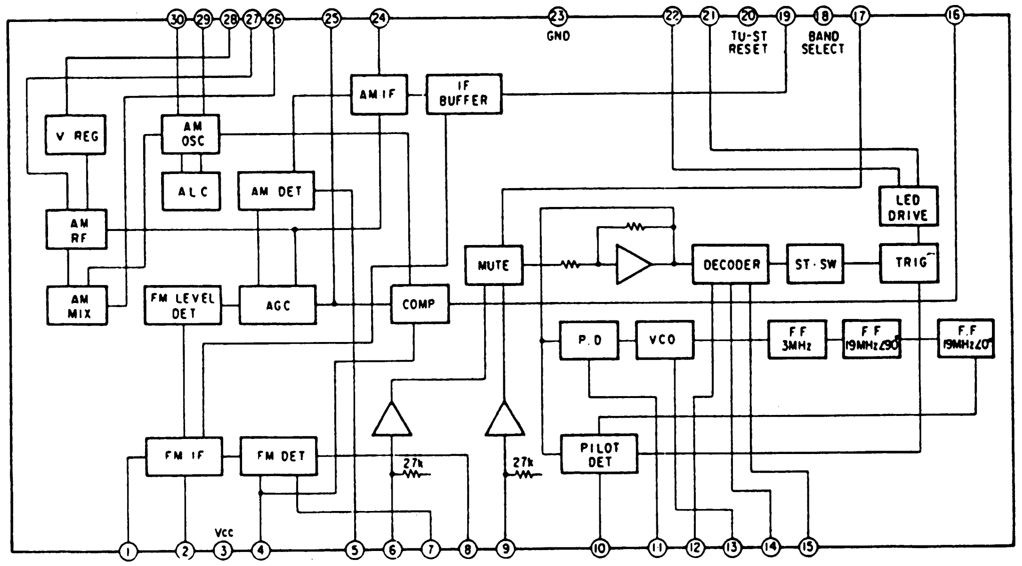
4-6. SCHEMATIC DIAGRAM – DISPLAY SECTION –

• See page 16 for note.

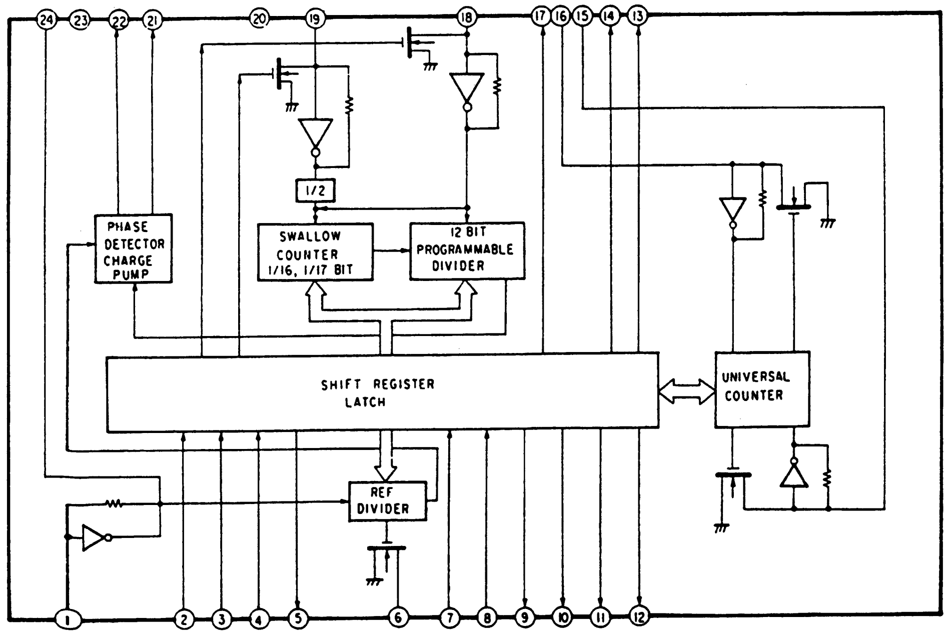

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
【 DISPLAY BOARD 】
(7G)
(6G ~ 1G)
FLT701
TIMER
ON/OFF
SLEEP
TUNER
CD REC
TAPE
123
LW
MW SW
AM FM
PM TV
TUNED
MUTING
MONO
AUTO
STEREO
MAIN SUB
MEMORY
kHz
MHz
CH
9G
8G
7G
5G
4G
1G
6G
3G
2G
REMOTE SENSOR
IC703
ST-H3600:GP1U52XB
ST-H6600:SBX1619-51
4.0 Vp-p
31 μsec
B–
B+
S701 CLOCK
S702 TIMER CONTROL
S703 TIMER SET
S705 MEMORY NEXT
S706 MODE
S707 STEREO MONO
S708 BAND
S709 –
S710 +
D701 1N4148
D702 1N4148
D707 1N4148
L701 100μH
L702 100μH
IC701
TMP87CK70F-6001
SYSTEM CONTROL
SIRCS IN
STEREO IN
SIGNAL IN
MUTE OUT
DUAL IN
SUB SEL
MAIN SEL
VDD
HOLD
IF NG OUT
LED (TUNING)
LED (PRESET)
AUB IN
AUB OUT
TEST
XT IN
XT OUT
RESET
X IN
X OUT
VSS
SCK
SI
SO
CE
IC702
ST-H3600:X24C01P
ST-H6600:X24C01S
EEP-ROM
NC
VCC
SCL
SDA
VSS
R704 3.3k
R707 3.3k
R708 2.2k
R709 3.3k
R712 330
D710 SEL2210S PRESET
D711 SEL2210S TUNING
Q701 2SC3402
Q702 2SC3402
Q701, 702 LED SWITCH
C701 100 6.3V
C702 0.1
Q703 2SC2603
RESET SWITCH
R713 220k
C703 0.1
R738 470k
D712 1N4148
Q705 2SA1115 HOLD
D714 1N4148
R715 1k
R737 220
D715 RD4.3B1
C704 0.1 50V
R714 10k
C705 0.022
XT701 32KHZ
CF701 8MHz
C706 15p
C707 15p
R736 10K
R720 10k
R719 10k
R721 10k
C710 0.1
C711 10 16V
R716 10k
D716 1N4148
R717 4.7k
R718 10k
Q706 2SC3402
Q707 2SC2603
Q706,707 AUDIO BUS BUFFER
R722 10k
R723 3.3k
R724 10k
D717 1N4148
D718 1N4148
R725 1k
R726 1k
R727 1k
R728 1k
R729 1k
R730 1k
R731 10k
R732 10k
R733 10k
R734 1k
C712 0.22 5.5V
C713 0.47
C714 0.47
C715 0.47
CNJ702
VG
VF
VF
AU BUS
MUTE
❶
TO TUNER BOARD CNJ2
CNJ701
GND
5.6V
STEREO
TUNED
SI
CLOCK
SO
CE
❷
TO TUNER BOARD CNJ1

4-7. IC BLOCK DIAGRAMS

IC21 LA1851N


30
29
28
27
26
25
24
23
GND
22
21
20
TU-ST RESET
19
18
BAND SELECT
17
16
V REG
AM OSC
ALC
AM DET
AM IF
IF BUFFER
AM RF
AM MIX
FM LEVEL DET
AGC
COMP
MUTE
DECODER
ST·SW
TRIG
LED DRIVE
P.D
VCO
F F 3MHz
F F 19MHz∠90°
F.F 19MHz∠0°
PILOT DET
FM IF
FM DET
27k
27k
Vcc
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

IC81 LC7218


24
23
22
21
20
19
18
17
16
15
14
13
PHASE DETECTOR CHARGE PUMP
1/2
SWALLOW COUNTER 1/16, 1/17 BIT
12 BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
REF DIVIDER
1
2
3
4
5
6
7
8
9
10
11
12

4-8. PIN FUNCTION OF IC701 SYSTEM CONTROLLER (TMP87CK70F-6001)

The terminals work to control tuner section (IC21, 81), FL tube display and reading and writing of IC702 (preset data), etc. according to key input and signal from the remote controller.

PIN No.	PIN NAME	I/O	ACTIVE	PIN FUNCTION
1	HOLD	I	↓	HOLD detecting interrupt terminal
2	HOLD RESET	I	↑	HOLD resetting interrupt terminal
3		I		Not in use
4	IF NGOUT	O	H	IF count NG output
5	LED1	O	H	TUNING LED ON
6	LED2	O	H	PRESET LED ON
7	AUB IN	I	L	AUDIO BUS input
8	AUB OUT	O	L	AUDIO BUS output
9	TEST	I	H	Test terminal
10	XT IN	I		Low frequency oscillator connection terminal (32KHz)
11	XT OUT	O		Low frequency oscillator connection terminal (32KHz)
12	RESET	I	L	Reset signal input
13	X IN	I		High frequency oscillator connection terminal (8MHz)
14	X OUT	O		High frequency oscillator connection terminal (8MHz)
15	VSS			GND
16		I		Not in use
17, 18		O		Not in use
19	SCK	O		PLL serial clock output
20	SI	I		PLL serial data input
21	SO	O		PLL serial data output
22				Not in use
23	CE	O	H	PLL chip enable
24				Not in use
25	MAIN SEL	O	L	Main sound selection terminal (Not in use)
26	SUB SEL	O	L	Sub sound selection terminal (Not in use)
27	DUAL IND	I	L	Sound dual signal detection terminal (Not in use)
28				Not in use
29	MUTE OUT	O	L	MUTING output
30	SIGNAL IN	I	L	TUNED input
31	STEREO IN	I	L	STEREO input
32	SIRCS IN	I	L	SIRCS input
33	VDD			+5V
34 - 40		O		Not in use
41 - 49	G0 - G8	O	H	FL tube digit output
50 - 59	S0 - S9	O	H	FL tube segment output
60 - 65		O	H	Not in use
66	VKK			FL tube driving power supply
67 - 71	KI0 - KI4	I	H	Key input
72		I		Not in use
73, 74				Not in use
75 - 78	KO0 - KO3	O	H	Key output
79	SDA	I/O		Data input/output for EEPROM
80	SCL	O		Clock output for EEPROM

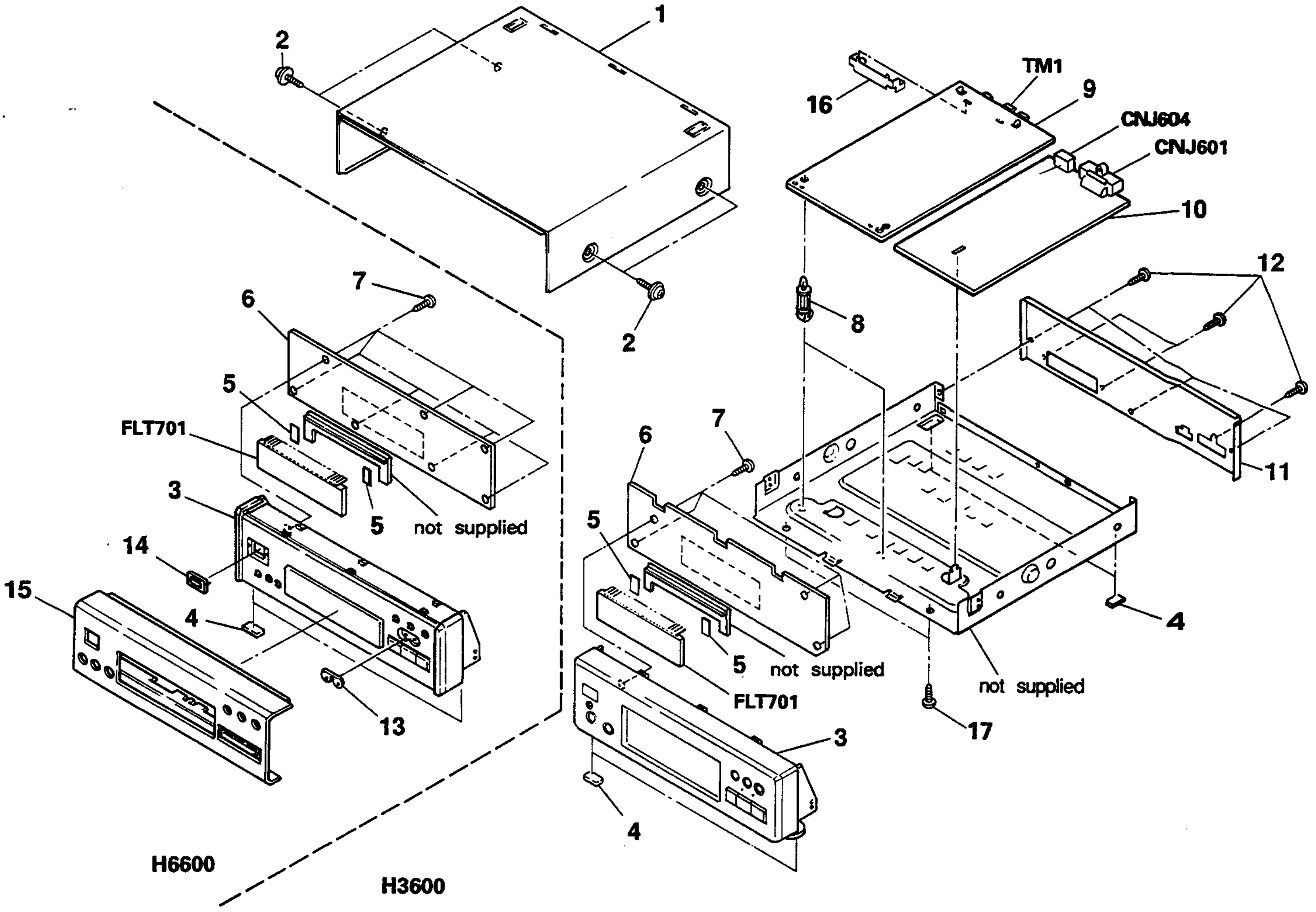
SECTION 5
EXPLODED VIEW

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
1	4-944-423-11	CASE (K206522) (H3600)	
	4-932-844-01	CASE (H6600)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4941-544-1	PANEL ASSY, ASSY (H3600)	
	X-4942-523-1	PANEL ASSY, ASSY (H6600)	
4	4-930-336-01	FOOT (FELT)	
5	* 4-932-810-11	CUSHION (FL)	
6	* A-4341-562-A	DISPLAY BOARD, COMPLETE (H3600: AEP,UK)	
	* A-4341-563-A	DISPLAY BOARD, COMPLETE (H3600: G,IT)	
	* A-4341-554-A	DISPLAY BOARD, COMPLETE (H6600: AEP,UK)	
	* A-4341-556-A	DISPLAY BOARD, COMPLETE (H6600: G,IT)	
7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
8	* 4-914-008-01	HOLDER, PCB	
9	A-4303-367-A	TUNER BOARD(TCB007-3HJFH),COMPLETE(AEP,UK)	
	A-4303-368-A	TUNER BOARD(TCB007-3IJFH),COMPLETE(G,IT)	

Ref. No.	Part No.	Description	Remarks
10	1-638-340-11	CONNECTOR BOARD (H3600)	
	1-638-336-11	CONNECTOR BOARD (H6600)	
11	* 4-942-893-51	PANEL, BACK (H3600: AEP,UK)	
	* 4-942-893-81	PANEL, BACK (H3600: G)	
	* 4-942-893-91	PANEL, BACK (H3600: IT)	
	* 4-942-893-01	PANEL, BACK (H6600: AEP,UK)	
	* 4-942-893-31	PANEL, BACK (H6600: G)	
	* 4-942-893-41	PANEL, BACK (H6600: IT)	
12	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
13	4-944-427-01	INDICATOR (H6600)	
14	4-944-425-01	FILTER (H6600)	
15	4-944-429-11	PANEL (ST), FRONT (H6600)	
16	* 4-924-988-11	PLATE (ST), GROUND	
17	7-682-547-09	SCREW +BVTT 3X6(S) (H6600)	

TUNER

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF :μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	A-4303-367-A	TUNER BOARD(TCB007-3HJFH), COMPLETE(AEP, UK)				
	A-4303-368-A	TUNER BOARD(TCB007-3IJFH), COMPLETE(G, IT)				
		**				
*	4-324-988-11	PLATE (ST), GROUND				
		〈 CAPACITOR 〉				
C1	1-162-294-11	CERAMIC CHIP	0.001uF	20%	25V	
C2	1-124-477-11	ELECT	330uF	20%	16V	
C3	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C4	1-162-294-31	CERAMIC CHIP	0.001uF	20%	25V	
C5	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C6	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C7	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	(G, IT)
C8	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	(G, IT)
C9	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C11	1-101-005-00	CERAMIC	0.022uF		50V	(G, IT)
C21	1-101-006-00	CERAMIC	0.047uF		50V	
C22	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C23	1-124-477-11	ELECT	47uF	20%	25V	
C24	1-123-382-00	ELECT	3.3uF	20%	100V	
C25	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C26	1-163-019-00	CERAMIC CHIP	0.0068uF	20%	12V	
C27	1-162-516-11	CERAMIC CHIP	100pF	10%	50V	(AEP, UK)
C27	1-163-007-11	CERAMIC CHIP	680pF	20%	50V	(G, IT)
C28	1-124-903-11	ELECT	1.0uF	20%	50V	
C29	1-162-516-11	CERAMIC CHIP	100pF	10%	50V	(G, IT)
C30	1-124-903-11	ELECT	1.0uF	20%	50V	
C31	1-124-902-00	ELECT	0.47uF	20%	50V	
C32	1-124-463-00	ELECT	0.1uF	20%	50V	
C33	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C34	1-123-382-00	ELECT	3.3uF	20%	100V	
C35	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C36	1-123-382-00	ELECT	3.3uF	20%	100V	
C37	1-124-907-11	ELECT	10uF	20%	50V	
C39	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C40	1-124-463-00	ELECT	0.1uF	20%	50V	
C41	1-124-907-11	ELECT	10uF	20%	50V	
C42	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C43	1-126-176-11	ELECT	220uF	20%	10V	
C44	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C45	1-123-382-00	ELECT	3.3uF	20%	100V	
C46	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V	
C47	1-163-170-00	CERAMIC CHIP	0.0047uF	20%	25V	(G, IT)
C48	1-123-382-00	ELECT	3.3uF	20%	100V	
C49	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V	
C50	1-163-170-00	CERAMIC CHIP	0.0047uF	20%	25V	(G, IT)
C51	1-124-477-11	ELECT	47uF	20%	25V	
C53	1-163-105-00	CERAMIC CHIP	33pF	5%	50V	
C54	1-101-005-00	CERAMIC	0.022uF		50V	(G, IT)
C61	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C62	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C63	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C64	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C65	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C66	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C67	1-102-120-00	CERAMIC	0.0018uF	10%	50V	
C68	1-163-111-11	CERAMIC CHIP	0.0015uF	20%	25V	
C69	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C70	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C71	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C72	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C73	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C81	1-102-961-00	CERAMIC	27pF	5%	50V	
C82	1-102-961-00	CERAMIC	27pF	5%	50V	
C83	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	
C84	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V	

Ref. No.	Part No.	Description	Remarks
C85	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C86	1-124-477-11	ELECT 47uF 20% 25V	
C87	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C88	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C89	1-124-443-00	ELECT 100uF 20% 10V	
C101	1-124-925-11	ELECT 2.2uF 20% 100V	
C102	1-124-463-00	ELECT 0.1uF 20% 50V	
C103	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C104	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C105	1-124-477-11	ELECT 47uF 20% 25V	
C106	1-136-173-00	FILM 0.47uF 5% 50V	
C107	1-124-463-00	ELECT 0.1uF 20% 50V	
C108	1-163-063-00	CERAMIC MELF 0.022uF 25V	(G, IT)
C109	1-162-211-31	CERAMIC 33pF 5% 50V	
C121	1-161-379-00	CERAMIC 0.01uF 30% 16V	(G, IT)
		(FILTER)	
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-567-389-11	FILTER, CERAMIC	
CF3	1-567-389-11	FILTER, CERAMIC	(G, IT)
		(OSCILLATOR)	
CF21	1-577-075-11	OSCILLATOR, CERAMIC (19KHz)	
		(IF TRANSFORMER)	
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	
		(CONNECTOR)	
CNJ1	* 1-564-342-11	SOCKET, CONNECTOR 8P	
CNJ2	* 1-564-339-00	PIN, CONNECTOR 5P	
CNJ3	* 1-564-341-11	PIN, CONNECTOR 7P	
CNJ4	* 1-564-337-00	PIN, CONNECTOR 3P	
		(DIODE)	
D61	8-719-912-20	DIODE 1SS120	
		(FM FRONT END)	
FE1	1-463-857-11	FRONT END, FM	(G, IT)
FE1	1-463-862-21	FRONT END, FM	(AEP, UK)
		(ENCAPSULATED COMPONENT)	
FE61	1-236-462-11	ENCAPSULATED COMPONENT (MW RF)	
FE62	1-236-463-11	ENCAPSULATED COMPONENT (LW RF)	
		(IC)	
IC21	8-759-821-45	IC LA1851N	
IC81	8-759-820-91	IC LC7218	

Ref. No.	Part No.	Description	Remarks
		(INDUCTOR)	
L1	1-410-645-31	MICRO INDUCTOR 100uH	
L2	1-410-645-31	MICRO INDUCTOR 100uH	(G, IT)
L21	1-407-500-00	MICRO INDUCTOR 4.7mH	
L61	1-410-525-11	MICRO INDUCTOR 220uH	
		(LOW PASS FILTER)	
LPF21	1-235-164-00	FILTER, LOW PASS	
LPF22	1-235-164-00	FILTER, LOW PASS	
		(TRANSISTOR)	
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q3	8-129-230-99	TRANSISTOR 2SC2669-OY	(G, IT)
Q4	8-129-230-99	TRANSISTOR 2SC2669-OY	(G, IT)
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q23	8-729-900-61	TRANSISTOR DTA114ES	
Q24	8-729-900-80	TRANSISTOR DTC114ES	
Q26	8-729-900-80	TRANSISTOR DTC114ES	
Q61	8-729-900-80	TRANSISTOR DTC114ES	
Q62	8-729-900-80	TRANSISTOR DTC114ES	
Q63	8-729-900-80	TRANSISTOR DTC114ES	
Q64	8-729-820-24	TRANSISTOR 2SC3330-T	
Q65	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q66	8-729-900-80	TRANSISTOR DTC114ES	
Q81	8-729-900-61	TRANSISTOR DTA114ES	
Q82	8-729-900-80	TRANSISTOR DTC114ES	
Q83	8-729-202-67	TRANSISTOR 2SK246GR3	
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB	
Q85	8-729-202-67	TRANSISTOR 2SK246GR3	
Q86	8-729-230-93	TRANSISTOR 2SC3113-AB	
		(RESISTOR)	
R1 ⚠	1-249-397-11	CARBON (SMALL) 22 5% 1/4W F	(G, IT)
R1 ⚠	1-249-401-11	CARBON (SMALL) 47 5% 1/4W F	(AEP, UK)
R3	1-249-329-11	CARBON MELF 330 5% 1/8W	
R4	1-249-329-11	CARBON MELF 330 5% 1/8W	
R5	1-249-329-11	CARBON MELF 330 5% 1/8W	
R6	1-249-350-11	CARBON MELF 18K 5% 1/8W	
R7	1-249-329-11	CARBON MELF 330 5% 1/8W	
R8	1-249-332-11	CARBON MELF 560 5% 1/8W	
R9	1-249-352-11	CARBON MELF 27K 5% 1/8W	
R10	1-249-329-11	CARBON MELF 330 5% 1/8W	(G, IT)
R11	1-249-350-11	CARBON MELF 18K 5% 1/8W	(G, IT)
R12	1-249-329-11	CARBON MELF 330 5% 1/8W	(G, IT)
R13	1-249-334-11	CARBON MELF 820 5% 1/8W	(G, IT)
R14	1-249-352-11	CARBON MELF 27K 5% 1/8W	(G, IT)

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Replace only with part number specified.

When indicating parts by reference number, please include the board name.

TUNER CONNECTOR DISPLAY

Ref. No.		Part No.	Description				Remarks
R15		1-249-374-11	CARBON MELF	10K	5%	1/8W	(G, IT)
R16		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	(G, IT)
R21	⚠	1-249-404-00	CARBON (SMALL)	82	5%	1/4W	F
R22		1-249-433-11	CARBON (SMALL)	22K	5%	1/4W	
R23		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R24		1-249-353-11	CARBON MELF	33K	5%	1/8W	
R25		1-249-346-11	CARBON MELF	8.2K	5%	1/8W	
R27		1-249-432-11	CARBON (SMALL)	18K	5%	1/4W	
R28		1-249-423-11	CARBON (SMALL)	3.3K	5%	1/4W	
R29		1-249-347-11	CARBON MELF	10K	5%	1/8W	
R31		1-249-331-11	CARBON MELF	470	5%	1/8W	
R32		1-249-347-11	CARBON MELF	10K	5%	1/8W	
R33		1-249-347-11	CARBON MELF	10K	5%	1/8W	
R34		1-249-437-11	CARBON (SMALL)	47K	5%	1/4W	
R35		1-249-355-11	CARBON MELF	47K	5%	1/8W	
R37		1-249-359-11	CARBON MELF	100K	5%	1/8W	
R38		1-249-363-11	CARBON MELF	220K	5%	1/8W	
R39		1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R40		1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R41		1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R42		1-249-359-11	CARBON MELF	100K	5%	1/8W	
R43		1-249-363-11	CARBON MELF	220K	5%	1/8W	
R44		1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R45		1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R46		1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R47	⚠	1-249-409-11	CARBON (SMALL)	220	5%	1/4W	F
R48		1-249-359-11	CARBON MELF	100K	5%	1/8W	
R49		1-249-359-11	CARBON MELF	100K	5%	1/8W	
R61		1-249-359-11	CARBON MELF	100K	5%	1/8W	
R62		1-249-355-11	CARBON MELF	47K	5%	1/8W	
R64		1-249-351-11	CARBON MELF	22K	5%	1/8W	
R65		1-249-355-11	CARBON MELF	47K	5%	1/8W	
R66		1-215-493-00	CARBON MELF	1M	5%	1/5W	
R67		1-249-359-11	CARBON MELF	100K	5%	1/8W	
R68		1-249-352-11	CARBON MELF	27K	5%	1/8W	
R69		1-249-351-11	CARBON MELF	22K	5%	1/8W	
R70		1-249-331-11	CARBON MELF	470	5%	1/8W	
R71		1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R72		1-249-351-11	CARBON MELF	22K	5%	1/8W	
R73		1-249-347-11	CARBON MELF	10K	5%	1/8W	
R74		1-249-347-11	CARBON MELF	10K	5%	1/8W	
R75		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R81		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R82		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R83		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R84		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R85		1-249-347-11	CARBON MELF	10K	5%	1/8W	
R86		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R87		1-249-347-11	CARBON MELF	10K	5%	1/8W	
R88		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R89		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R90		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R91		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R92	⚠	1-249-401-11	CARBON (SMALL)	47	5%	1/4W	F
R101		1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R102		1-249-332-11	CARBON MELF	560	5%	1/8W	
R103		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R104		1-249-328-11	CARBON MELF	270	5%	1/8W	
R105		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R106		1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R107		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R108		1-249-323-11	CARBON MELF	100	5%	1/8W	
R109		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R110	⚠	1-249-405-11	CARBON (SMALL)	100	5%	1/4W	F
R111		1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R112		1-249-332-11	CARBON MELF	560	5%	1/8W	
R113		1-249-335-11	CARBON MELF	1K	5%	1/8W	
R114		1-249-328-11	CARBON MELF	270	5%	1/8W	
R115		1-249-351-11	CARBON MELF	22K	5%	1/8W	
R116		1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R117		1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R118		1-249-323-11	CARBON MELF	100	5%	1/8W	
			< VARIABLE RESISTOR >				
RV21		1-238-598-11	RES, ADJ, CARBON 2.2K				(AEP, UK)
RV21		1-238-599-11	RES, ADJ, CARBON 4.7K				(G, IT)
RV22		1-238-601-11	RES, ADJ, CARBON 22K				
RV24		1-238-601-11	RES, ADJ, CARBON 22K				(AEP, UK)
RV24		1-238-602-11	RES, ADJ, CARBON 47K				(G, IT)
			< TRANSFORMER >				
T21		1-404-807-11	TRANSFORMER, DISCRIMINATOR				
T23		1-236-465-11	ENCAPSULATED COMPONENT				(G, IT)
			< TERMINAL >				
TM1	*	1-537-138-31	TERMINAL BOARD (ANTENNA)				
			< CONNECTOR PIN >				
TP1	*	1-560-060-00	PIN, CONNECTOR 2P				
			< CRYSTAL VIBRATOR >				
XT81		1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)				

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1-638-340-11 CONNECTOR BOARD (H3600)
1-638-336-11 CONNECTOR BOARD (H6600)
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Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CONNECTOR DISPLAY

Ref. No.	Part No.	Description	Remarks
	* A-4341-562-A	DISPLAY BOARD, COMPLETE (H3600: AEP, UK)	
	* A-4341-563-A	DISPLAY BOARD, COMPLETE (H3600: G, IT)	
	* A-4341-554-A	DISPLAY BOARD, COMPLETE (H6600: AEP, UK)	
	* A-4341-556-A	DISPLAY BOARD, COMPLETE (H6600: G, IT)	
		**	
	* 4-932-810-11	CUSHION (FL)	
		(CAPACITOR)	
C601	1-124-471-00	ELECT 1000uF 20% 6.3V	
C701	1-126-177-11	ELECT 100uF 20% 10V	
C702	1-164-159-11	CERAMIC 0.1uF 50V	
C703	1-164-159-11	CERAMIC 0.1uF 50V	
C704	1-124-463-00	ELECT 0.1uF 20% 50V	
C705	1-161-494-00	CERAMIC 0.022uF 25V	
C706	1-162-203-31	CERAMIC 15PF 5% 50V	
C707	1-162-203-31	CERAMIC 15PF 5% 50V	
C710	1-164-159-11	CERAMIC 0.1uF 50V	
C711	1-126-157-11	ELECT 10uF 20% 16V	
C712	1-125-624-11	DUBLE LAYERS 0.22F 5.5V	
C713	1-136-173-00	FILM 0.47uF 5% 50V	
C714	1-136-173-00	FILM 0.47uF 5% 50V	
C715	1-136-173-00	FILM 0.47uF 5% 50V	
		(CERAMIC VIBRATOR)	
CF701	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	
		(CONNECTOR)	
CNJ601	* 1-566-859-11	SOCKET, CONNECTOR 15P	
CNJ602	* 1-564-341-11	PIN, CONNECTOR 7P	
CNJ603	* 1-564-337-00	PIN, CONNECTOR 3P	
CNJ604	* 1-565-561-11	PIN, CONNECTOR 3P	
CNJ701	* 1-564-342-11	PIN, CONNECTOR 8P	
CNJ702	* 1-564-339-00	PIN, CONNECTOR 5P	
		(DIODE)	
D701	8-719-912-20	DIODE 1SS120	
D702	8-719-912-20	DIODE 1SS120	
D707	8-719-912-20	DIODE 1SS120	
D710	8-719-301-39	DIODE SEL2210S-D (PRESET)	
D711	8-719-301-39	DIODE SEL2210S-D (TUNING)	
D712	8-719-912-20	DIODE 1SS120	
D714	8-719-912-20	DIODE 1SS120	
D715	8-719-010-28	DIODE UZ-4.3BSA	
D716	8-719-912-20	DIODE 1SS120	
D717	8-719-912-20	DIODE 1SS120	
D718	8-719-912-20	DIODE 1SS120	

Ref. No.	Part No.	Description	Remarks
		(INDICATOR)	
FLT701 ⚠	1-519-651-11	INDICATOR TUBE, FLUORESCENT	
		(IC)	
IC701	8-759-246-31	IC TMP87CK70F-6001	
IC702	8-759-500-31	IC X24C01P (H3600)	
IC702	8-759-504-12	IC X24C01S (H6600)	
IC703	8-749-920-83	IC GP1U52XB (H3600)	
IC703	8-741-100-63	IC SBX1619-51 (H6600)	
		(COIL)	
L701	1-410-521-11	INDUCTOR 100uH	
L702	1-410-521-11	INDUCTOR 100uH	
		(TRANSISTOR)	
Q701	8-729-900-80	TRANSISTOR DTC114ES	
Q702	8-729-900-80	TRANSISTOR DTC114ES	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q705	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q706	8-729-900-80	TRANSISTOR DTC114ES	
Q707	8-729-620-05	TRANSISTOR 2SC2603-EF	
		(RESISTOR)	
R601	1-249-393-11	CARBON 10 5% 1/4W	
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R702	1-249-417-11	CARBON 1K 5% 1/4W	
R703	1-249-417-11	CARBON 1K 5% 1/4W	
R704	1-249-417-11	CARBON 1K 5% 1/4W	
R705	1-249-417-11	CARBON 1K 5% 1/4W	
R706	1-249-423-11	CARBON 3.3K 5% 1/4W	
R707	1-249-423-11	CARBON 3.3K 5% 1/4W	
R708	1-249-421-11	CARBON 2.2K 5% 1/4W	
R709	1-249-423-11	CARBON 3.3K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R712	1-249-411-11	CARBON 330 5% 1/4W	
R713	1-247-887-00	CARBON 220K 5% 1/4W	
R714	1-249-429-11	CARBON 10K 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-429-11	CARBON 10K 5% 1/4W	
R717	1-249-425-11	CARBON 4.7K 5% 1/4W	
R718	1-249-429-11	CARBON 10K 5% 1/4W	
R719	1-249-429-11	CARBON 10K 5% 1/4W	
R720	1-249-429-11	CARBON 10K 5% 1/4W	
R721	1-249-429-11	CARBON 10K 5% 1/4W	
R722	1-249-429-11	CARBON 10K 5% 1/4W	
R723	1-249-423-11	CARBON 3.3K 5% 1/4W	
R724	1-249-429-11	CARBON 10K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

CONNECTOR DISPLAY

Ref. No.	Part No.	Description	Remarks
R725	1-249-417-11	CARBON 1K 5% 1/4W	
R726	1-249-417-11	CARBON 1K 5% 1/4W	
R727	1-249-417-11	CARBON 1K 5% 1/4W	
R728	1-249-417-11	CARBON 1K 5% 1/4W	
R729	1-249-417-11	CARBON 1K 5% 1/4W	
R730	1-249-417-11	CARBON 1K 5% 1/4W	
R731	1-249-429-11	CARBON 10K 5% 1/4W	
R732	1-249-429-11	CARBON 10K 5% 1/4W	
R733	1-249-429-11	CARBON 10K 5% 1/4W	
R734	1-249-417-11	CARBON 1K 5% 1/4W	
R736	1-249-429-11	CARBON 10K 5% 1/4W	
R737	1-249-409-11	CARBON 220 5% 1/4W	
R738	1-247-895-00	CARBON 470K 5% 1/4W	
		〈 SWITCH 〉	
S701	1-554-303-21	SWITCH, TACTILE (CLOCK)	
S702	1-554-303-21	SWITCH, TACTILE (TIMER CONTROL)	
S703	1-554-303-21	SWITCH, TACTILE (TIMER SET)	
S705	1-554-303-21	SWITCH, TACTILE (MEMORY NEXT)	
S706	1-554-303-21	SWITCH, TACTILE (MODE)	
S707	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)	
S708	1-554-303-21	SWITCH, TACTILE (BAND)	
S709	1-554-303-21	SWITCH, TACTILE (TUNING -)	
S710	1-554-303-21	SWITCH, TACTILE (TUNING +)	
		〈 CRYSTAL VIBRATOR 〉	
XT701	1-527-997-22	VIBRATOR, CRYSTAL (32kHz)	

English
91C1957-1
Printed in Japan
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Sony Corporation
Audio Group

Published by Customer Relations and Service Group

ST-H3600/H6600

SONY®
SERVICE MANUAL

4/18

AEP Model
UK Model

CORRECTION-1

Correct your service manual as shown below.

☞ : indicates corrected portion.

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
25	3	X-4941-544-1	PANEL ASSY, ASSY (H3600)	X-4941-544-1	PANEL ASSY, ASSY (H3600)
		X-4942-523-1	PANEL ASSY, ASSY (H6600)	X-4941-523-1	PANEL ASSY, ASSY (H6600)

Sony Corporation
Audio Group

9-956-240-81

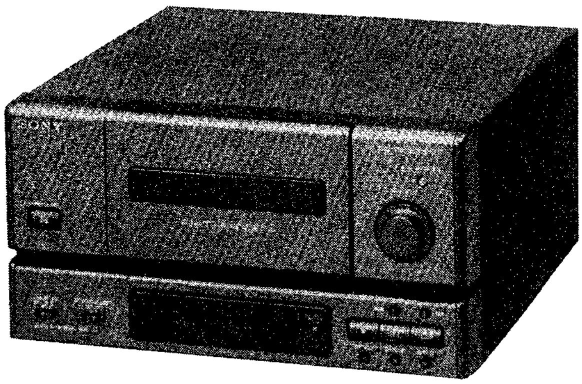
English
93E0958-1
Printed in Japan
© 1993.5
Published by Audio Sector Quality Assurance Dept.

SONY-04687

TC-H5600

SERVICE MANUAL

AEP Model
UK Model
E Model



This unit is the cassette deck for the MHC-5600 component system.

Model Name Using Similar Mechanism	TC-WR97ES/WR870
Tape Transport Mechanism Type	TCM-200R8

SPECIFICATIONS

Recoding system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF) 30 – 14,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S) 30 – 15,000 Hz (±3 dB) using TYPE II cassette 30 – 16,000 Hz (±3 dB) using TYPE IV cassette
Wow and flutter	0.06% WRMS ±0.16% (DIN)
Inputs	PHONO (phono jacks): sensitivity 5 mV impedance 47 kohms VIDEO (phono jacks) sensitivity 300 mV impedance 47 kohms

Design and specifications subject to change without notice.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ▯▯ are trademarks of Dolby Laboratories Licensing Corporation.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

STEREO CASSETTE DECK

SONY®

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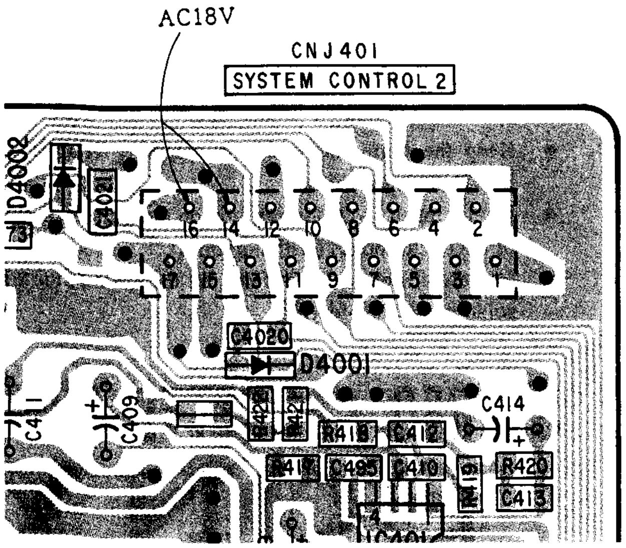
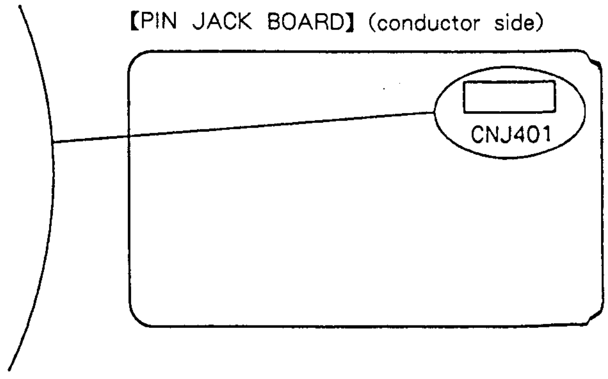
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Caution when repairing

Normally the power of this set is supplied from the TA-H5600 amplifier connected. When only this set is repaired, connect the power of 18V AC as shown in the figure below.

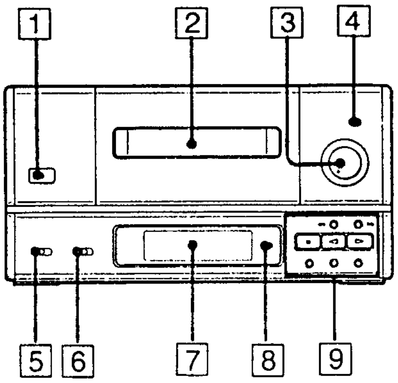

AC18V
CNJ401
SYSTEM CONTROL 2
D4002
C4021
16
14
12
10
8
6
4
2
17
15
13
11
9
7
5
3
1
C4020
D4001
C414
C409
R418
C412
C4025
C410
R420
C413
IC401


[PIN JACK BOARD] (conductor side)
CNJ401

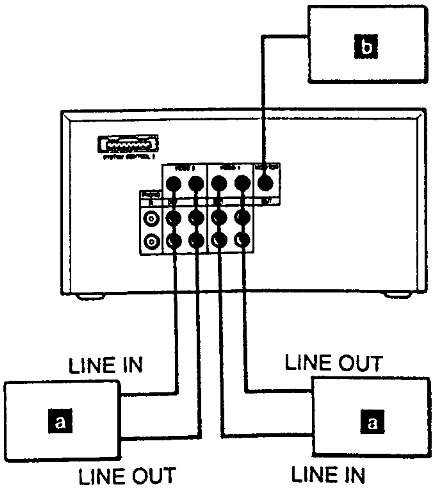
SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATION AND FUNCTION CONTROLS



1 ≜ OPEN/CLOSE button
2 Cassette holder
3 REC LEVEL (recording level) control (92)
4 AUTO REC LEVEL (automatic recording level) button (96)
5 DOLBY NR (Dolby Noise Reduction) button (64)
6 DIRECTION MODE button (62)
7 Display window
8 COUNTER RESET button
Resets the counter of the cassette deck to "0".
9 Tape operation buttons
◀◀ ▶▶ : Fast winding
■ : Stop
▷ : Forward play
◁ : Reverse play
II : PAUSE
: MUTE (Muting)
● : REC (recording)



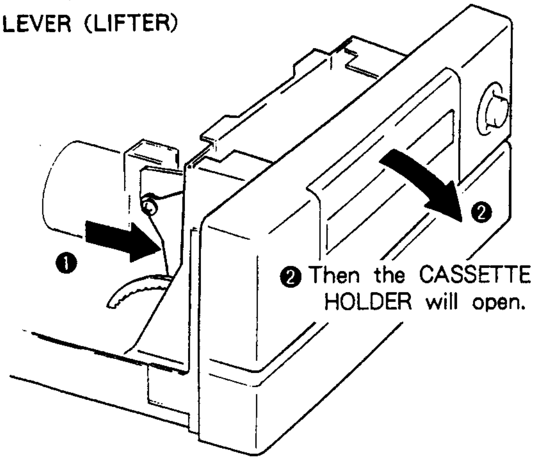
You can connect a VCR a to the VIDEO 1 or VIDEO 2 jacks. You can also connect a monitor TV b to MONITOR OUT. (TV with MONITOR IN jacks only.) To select VCR, press the VIDEO FUNCTION selector and light up the VIDEO 1 or VIDEO 2 indicator.

SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

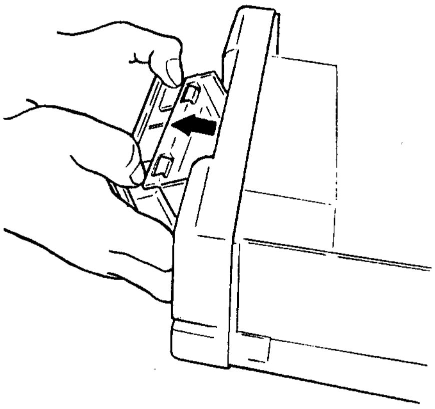
• FRONT PANEL

LEVER (LIFTER)

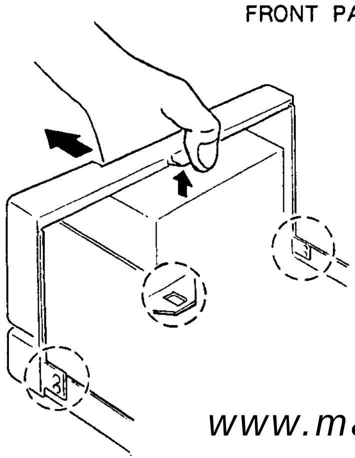

❶
❷
❷ Then the CASSETTE HOLDER will open.

❶ Push LEVER (LIFTER) in the direction of arrow ❶. (Refer to the item of CASSETTE HOLDER on page 5.)

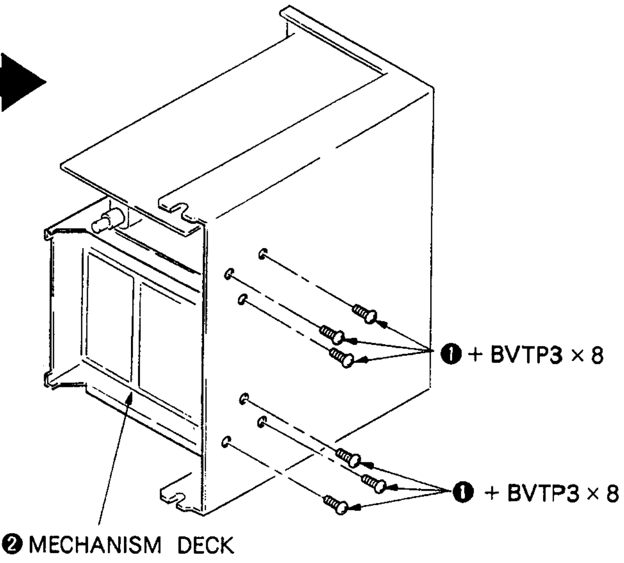
CASSETTE LID



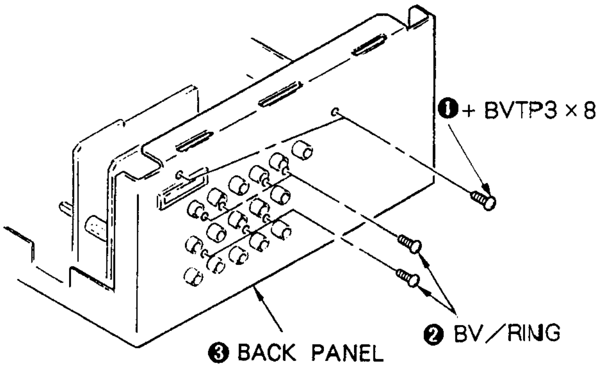
FRONT PANEL

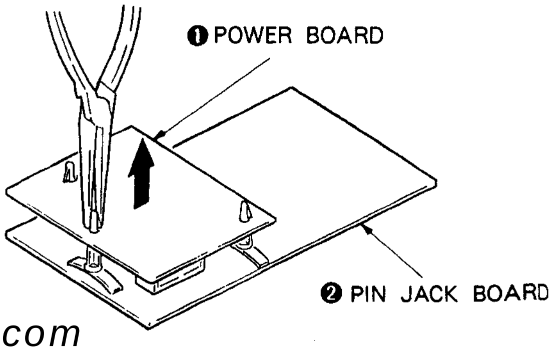


• MECHANISM DECK

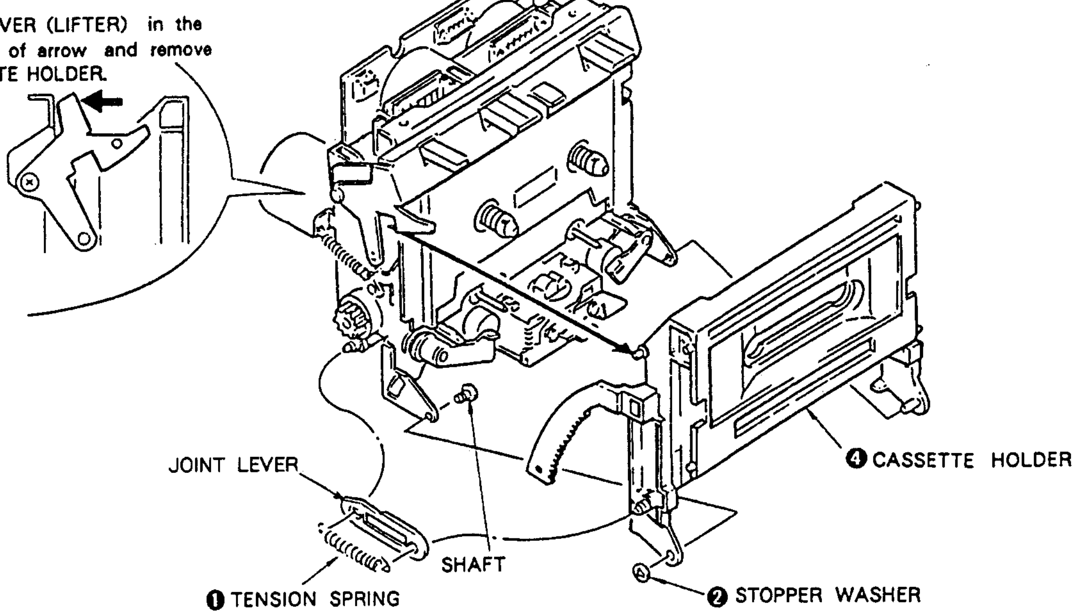

❶ + BVTP3 × 8
❶ + BVTP3 × 8
❷ MECHANISM DECK

• PIN JACK/POWER BOARD


❶+ BVTP3 × 8
❷ BV/RING
❸ BACK PANEL


❶ POWER BOARD
❷ PIN JACK BOARD

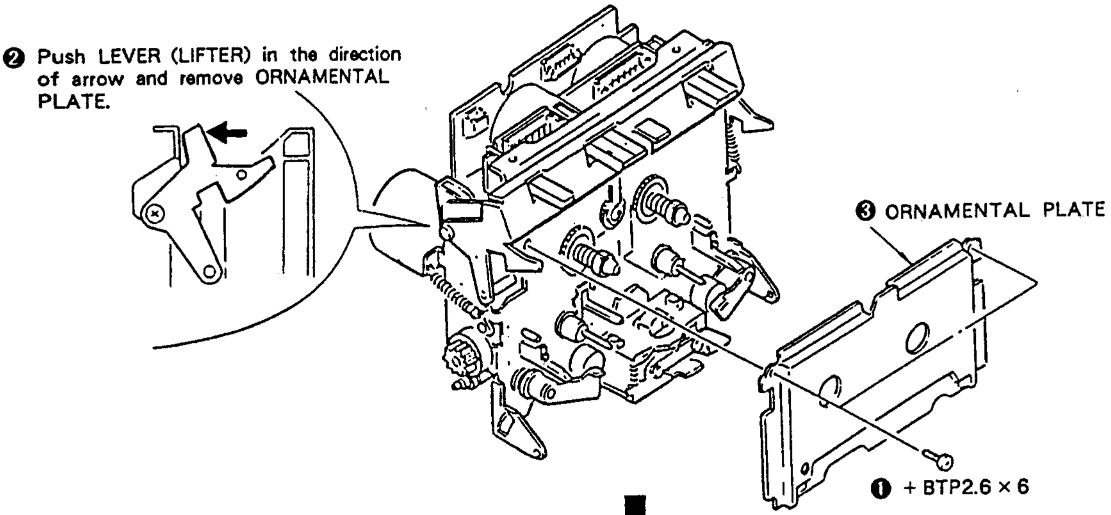
• CASSETTE HOLDER



③ Push LEVER (LIFTER) in the direction of arrow and remove CASSETTE HOLDER.

JOINT LEVER
① TENSION SPRING
SHAFT
② STOPPER WASHER
④ CASSETTE HOLDER

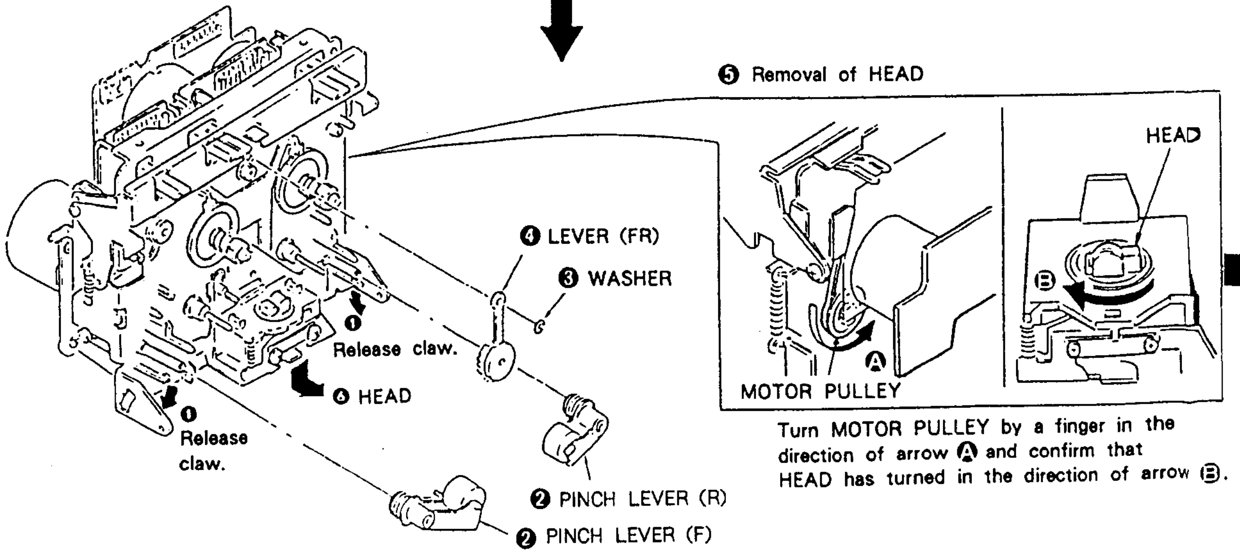
• ORNAMENTAL PLATE



② Push LEVER (LIFTER) in the direction of arrow and remove ORNAMENTAL PLATE.

③ ORNAMENTAL PLATE
① + BTP2.6 × 6

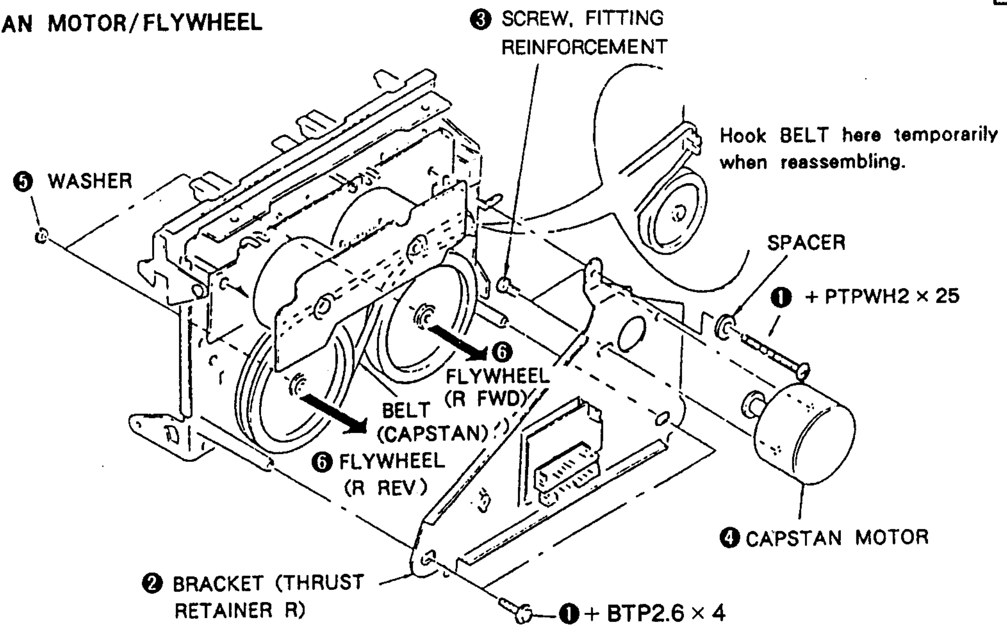
•PINCH LEVER/HEAD



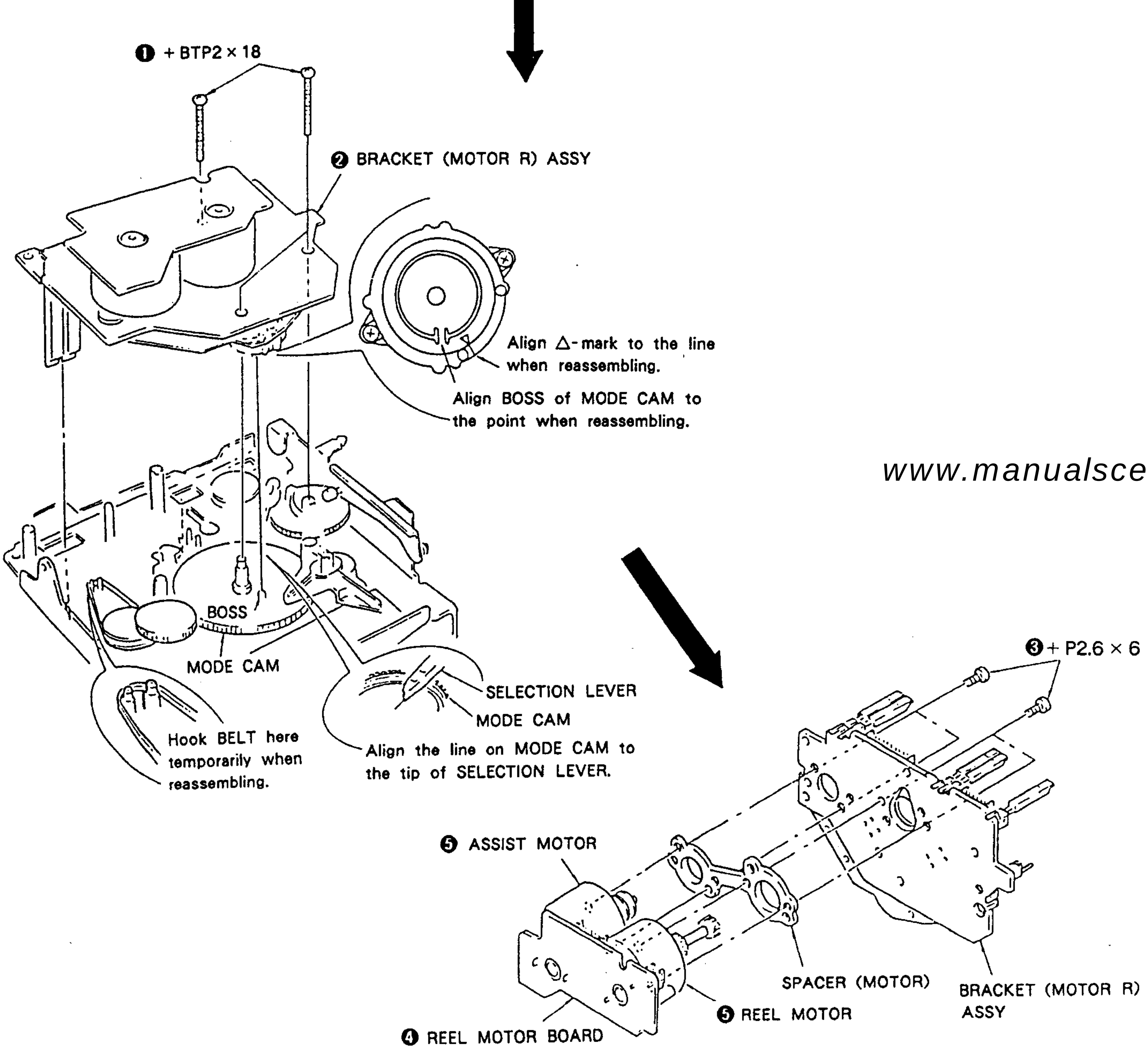
⑤ Removal of HEAD
HEAD
Ⓑ
Ⓐ
MOTOR PULLEY
④ LEVER (FR)
③ WASHER
① Release claw.
⑥ HEAD
① Release claw.
② PINCH LEVER (R)
② PINCH LEVER (F)

Turn MOTOR PULLEY by a finger in the direction of arrow Ⓐ and confirm that HEAD has turned in the direction of arrow Ⓑ.

CAPSTAN MOTOR/FLYWHEEL


❸ SCREW, FITTING
REINFORCEMENT
Hook BELT here temporarily when reassembling.
❺ WASHER
SPACER
❶ + PTPWH2 × 25
❻
FLYWHEEL
(R FWD)
BELT
(CAPSTAN)
❻ FLYWHEEL
(R REV)
❹ CAPSTAN MOTOR
❷ BRACKET (THRUST
RETAINER R)
❶ + BTP2.6 × 4

REEL and ASSIST MOTORS


❶ + BTP2 × 18
❷ BRACKET (MOTOR R) ASSY
Align △-mark to the line when reassembling.
Align BOSS of MODE CAM to the point when reassembling.
BOSS
MODE CAM
SELECTION LEVER
MODE CAM
Hook BELT here temporarily when reassembling.
Align the line on MODE CAM to the tip of SELECTION LEVER.
❸ + P2.6 × 6
❺ ASSIST MOTOR
SPACER (MOTOR)
BRACKET (MOTOR R)
ASSY
❺ REEL MOTOR
❹ REEL MOTOR BOARD

SECTION 3
MECHANICAL ADJUSTMENTS

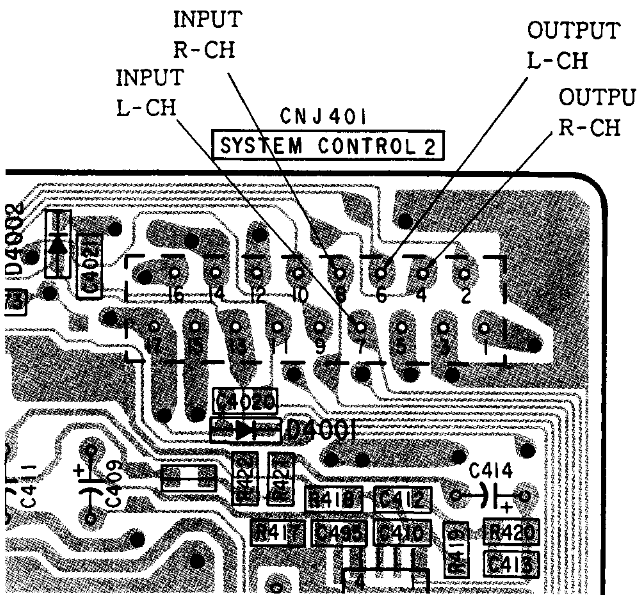
PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:
   - record/playback head
   - erase head
   - capstan
   - pinch roller
   - rubber belts
   - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 60g·cm (0.42to 0.83 oz·inch)
Forward back tension	CQ-102C	1 to 5g · cm (0.014 to0.069oz · inch)
Reverse	CQ-102RC	30 to 60g · cm (0.42 to 0.83oz · inch)
Reverse back tension	CQ-102RC	1 to 5g · cm (0.014 to0.069oz · inch)
Forward, Reverse	CQ-201B	65 to 90g·cm (0.9 to 1.25 oz·inch)

LINE IN/OUT Terminal (CNJ401)


INPUT R-CH
INPUT L-CH
OUTPUT L-CH
OUTPUT R-CH
CNJ401
SYSTEM CONTROL 2
D4002
C4021
16
14
12
10
8
6
4
2
15
13
11
9
7
5
3
1
C4026
D4001
C411
C409
R422
R421
C414
R418
C412
R417
C495
C410
R419
R420
C413

SECTION 4
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   - Switch position
     DOLBY NR switch : OFF
     DIR MODE switch : ⇄

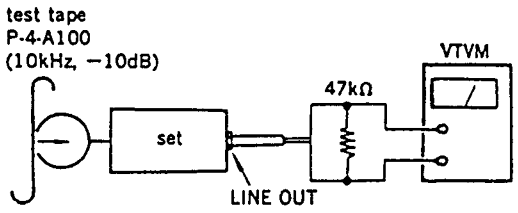
Test Tape

Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

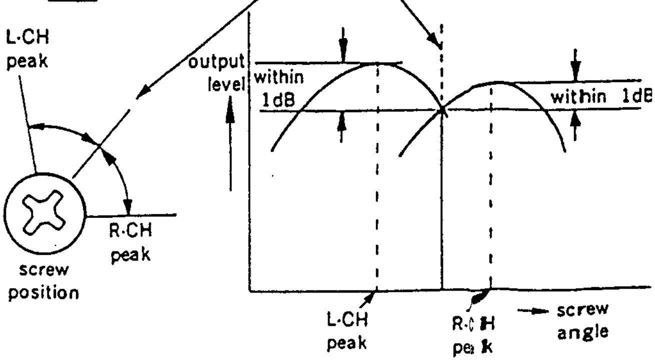
Record/Playback Head Azimuth Adjustment

Procedure:

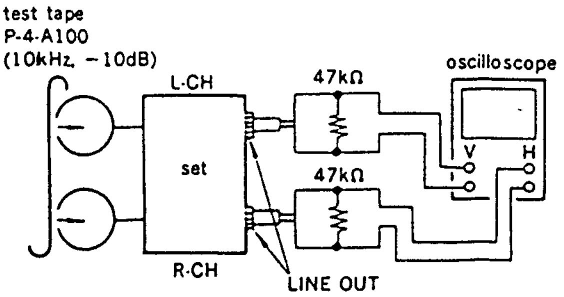
1. Forward Playback Mode

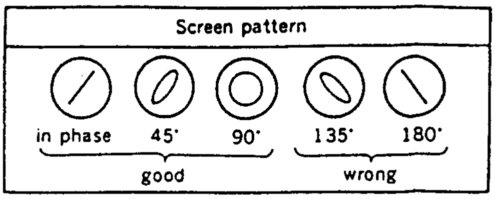

test tape
P-4-A100
(10kHz, −10dB)
VTVM
47kΩ
set
LINE OUT

2. Turn the adjustment screw for the maximum output levels. If these levels do notmatch, turn the adjustment screw until both of output levels match together within 1dB.


L-CH peak
output level
within 1dB
within 1dB
R-CH peak
screw position
L-CH peak
R-CH peak
screw angle

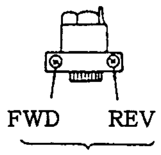
3. Playback Mode


test tape
P-4-A100
(10kHz, −10dB)
L-CH
47kΩ
oscilloscope
set
47kΩ
V
H
R-CH
LINE OUT


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location : – record/playback head –

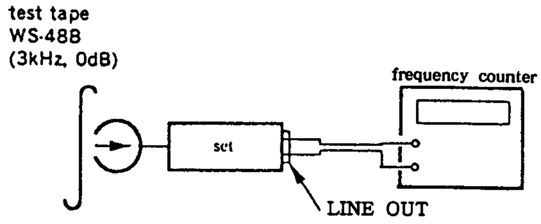


Adjustment screw

Tape Speed Adjustment

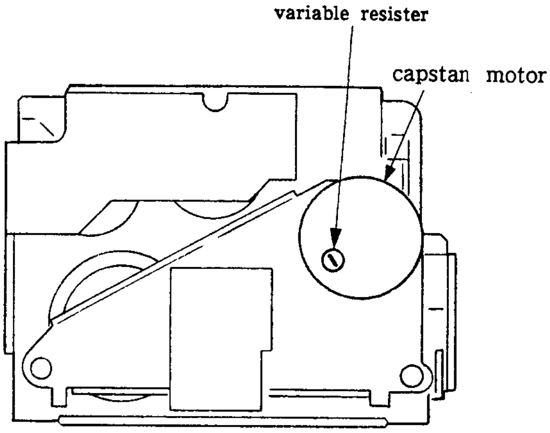
Procedure :

—Forward Playback Mode—


test tape
WS-48B
(3kHz, 0dB)
frequency counter
set
LINE OUT

1. Set to FWD playback mode.
2. Adjust motor rear side (variable resistor) so that the frequency counter reading becomes 3,000 ± 15Hz.

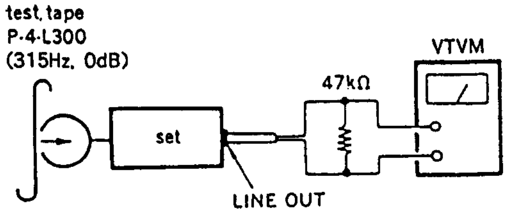
Adjustment Location : – capstan motor –


variable resister
capstan motor

Playback Level Adjustment

Procedure:

—Forward Playback Mode—


test, tape
P-4-L300
(315Hz, 0dB)
VTVM
47kΩ
set
LINE OUT

Adjustment RV101 (L-ch) and RV201 (R-ch) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limit:

LINE OUT level: −10 ± 0.5dB (0.23 to 0.26V)

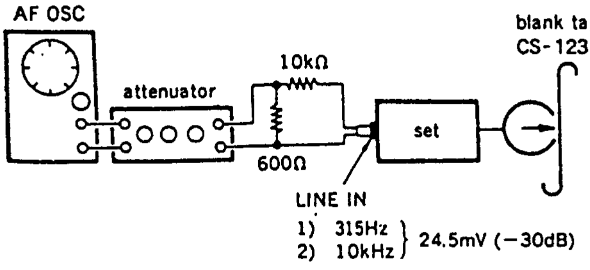
Level Difference between Channels: within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

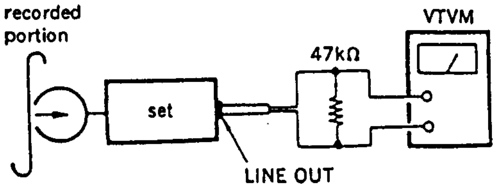
Record Bias Adjustment

Procedure:

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE IN
1) 315Hz
2) 10kHz
24.5mV (−30dB)

2. Playback Mode

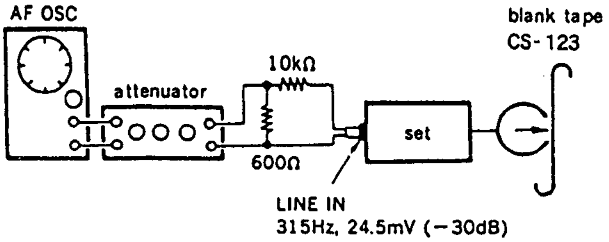

recorded
portion
VTVM
47kΩ
set
LINE OUT

Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust RV103 (L-CH), RV203 (R-CH) and repeat the steps given above.

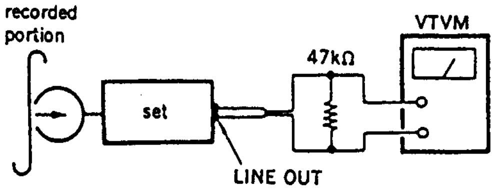
Record Level Adjustment

Procedure:

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE IN
315Hz, 24.5mV (−30dB)

2. Playback Mode


recorded
portion
VTVM
47kΩ
set
LINE OUT

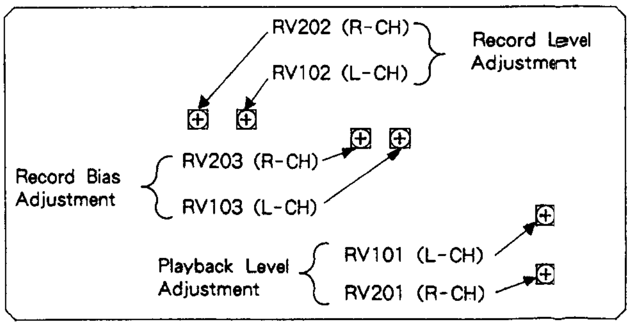
Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV102 (L-CH), RV202 (R-CH) and repeat steps 1 and 2.

Adjustment Limits:

LINE OUT level: −30 ± 0.5dB (23 to 26mV)

Adjustment Location:

【MAIN (B) BOARD】 – component side –


RV202 (R-CH)
RV102 (L-CH)
Record Level Adjustment
Record Bias Adjustment
RV203 (R-CH)
RV103 (L-CH)
Playback Level Adjustment
RV101 (L-CH)
RV201 (R-CH)

SECTION 5
DIAGRAMS

5-1. IC PIN DESCRIPTION

IC601 display microprocessor HD614023FA89

Fluorescent lamp indicator is activated by receiving data from IC702 (system controller).

Pin	Pin Name	I/O	Description
1～11	k-a	O	FL indicator tube(FL601)segment output.
12			Not used(+5.6 V).
13	VDISP	—	Power supply for activating the FL indicator tube(-22 V).
14～25		I	Not used(GND).
26	Vcc	—	Power supply terminal(+5.6 V).
27	CLK	I	Data transmission clock input from IC702(system controller).
28	DATA	I	Serial data input from IC702(system controller).
29	SYNC	I	Sync signal input which indicates the first byte of data sent from IC702(system controller).
30			Not used(GND).
31	SAF	O	LED(D601)light output in the AUTO REL LEVEL.
32～35		O	Not used.
36～42			Not used(GND).
43	RESET	I	Reset input from IC702(system controller). "L": Reset.
44	TEST	I	Not used(+5.6V).
45	OSC1	I	Clock input(4.19MHz).
46	OSC2	O	Clock output.
47	GND	—	Power supply terminal(GND).
48～50			Not used(GND).
51			Not used(Pull-up).
52			Not used.
53～57	1G－5G	O	FL indicator tube(FL601)grid output.
58～59		O	Not used.
60～64	p－l	O	FL indicator tube(FL601)segment output.

IC406 selector controller M50760-315FP

AV output is switched with the audio bus signal sent from the amplifier (TA-H5600).

Pin	Pin Name	I/O	Description
1	D3	I	Model selection input port. Connected to GND.
2	A0	O	Audio IN switch(IC403 and IC404)control output port.
3			Not used.
4	A1	O	Audio IN switch(IC403 and IC404)control output port.
5	CNVss	—	Power supply terminal(GND).
6	Vss	—	Power supply terminal(GND).
7	A2	O	Audio IN switch(IC403 and IC404)control output port.
8	B0	O	Audio OUT switch(IC405)control output port.
9	B1	O	Audio OUT switch(IC405)control output port.
10			Not used.
11	V0	O	Video IN/OUT switch(IC407)control output port.
12	V1	O	Video IN/OUT switch(IC407)control output port.
13～14			Not used(GND).
15			Not used.
16	RESET	I	Reset input. "L": Reset
17	XOUT	O	Clock output.
18	XIN	I	Clock input.
19	S	I	Serial data input(audio bus).
20	D0	I	Serial data input(audio bus).
21	D1	I	Model selection input port. Connected to +5 V(pull up).
22			Not used.
23	D2	I	Model selection input port. Connected to GND.
24	V_{DD}	—	Power supply terminal(+5 V).

IC702 system controller M50944-155SP

The system is wholly controlled by communication between IC601 (display microprocessor) and IC701 (mechanism controller).

Pin No.	Pin Name	I/O	Description
1	VREF	I	A/D input port reference voltage input(+5.6 V).
2	MET－R	I	Level meter Rch input(analog)from the meter amplifier(IC305).
3	MET－L	I	Level meter Lch input(analog)from the meter amplifier(IC305).
4	VOL A/D	I	REC LEVEL VOLUME(RV301)position detect input(analog).
5		—	Not used.
6	KEY4	I	Key switch input(analog).
7	KEY3	I	Key switch input(analog).
8	KEY2	I	Key switch input(analog).
9	KEY1	I	Key switch input(analog).
10	SYNC	O	Sync signal output which indicates the first byte of data sent to IC601.
11	FL SK	O	Data transmission clock output to IC601.
12	FL SO	O	Serial data output to IC601.
13	AUB OUT	O	Audio bus output.
14	AUB IN	I	Audio bus output(negative edge).
15	POW IN	I	Not used(pull up).
16	PB SEL	O	Not used(open).
17	AMS SEL	O	Not used(open).
18	MD REQ	I	Data request input from IC701.
19	MD SCLK	O	Data transmission clock output to IC701.
20	MD SO	O	Serial data output to IC701.
21	MD SI	I	Serial data input from IC701.
22	RES OUT	O	Reset signal output to IC601.
23		—	Not used(open).
24	AUB IN	I	Audio bus input(positive edge).
25		—	Not used(open).
26	GND	—	Power supply terminal(GND).
27	RES	I	System reset input. "L": Reset.
28	XIN	I	Clock input(4 MHz).
29	XOUT	O	Clock output.
30,31		—	Not used(open).
32	Vss	—	Power supply terminal(GND).
33	ϕ	—	Not used(open).
34	TEST 2	I	Test mode setting input. This set enters into the test mode when the power is on and it is set to "L"(CNP703 is shortened)＊1
35	TEST 1	I	Not used(GND).
36,37	VERSEL	I	Not used(+5.6 V).
38		—	Not used(open).
39	POW ON	I	Not used(GND).
40	VOL LED	O	Volume LED ON/OFF output. "L": light up.
41	VOL－	O	Volume moter(RV301)down control output for IC706.
42	VOL＋	O	Volume moter(RV301)up control output for IC706.
43	VOL SPD	O	Volume moter speed control output. "H": SLOW, "L": FAST.
44～47		O	Not used(open).
48	BIAS 4	O	Tape bias select output. "L": Metal.
49	BIAS 2	O	Tape bias select output. "L": CrO2.
50	BIAS 1	O	Tape bias select output. "L": Normal.
51	RMUTE	O	REC mute control output.
52		O	Not used(open).
53	RELAY	O	Mechanism deck head switch control output. "L": Relay on.
54		O	Not used(open).

Pin No.	Pin Name	I/O	Description
55	B/C	O	Dolby B/C control output. "L": Dolby C, "H": Dolby B.
56	ON/OFF	O	Dolby ON/OFF control output. "C": ON, "H": OFF
57	REC/PB	O	Dolby amplifier REC/PB control output. "L": REC, "H": PB.
58	PB70µs	O	Playback equalizer characteristic switch output. "H": Normal, "L": CrO2 or Metal.
59	AMS IN	O	Signal input from the AMS amplifier(IC304). With music: "H", No music: "L".
60	AMS/BS	O	Not used.
61	PASS	O	Not used(connect to (62) pin).
62	L MUTE	O	Line mute control output. "H": MUTE.
63	AVcc	O	Power supply terminal(+5.6 V).
64	Vcc	O	Power supply terminal(+5.6 V).

*1 Test mode
When the power is on and pin ㉞ is set to "L"(CNP703 is shortened.), the set enters the electrical adjustment test mode and the followings can be available.

(1) Source monitor
Recording signals can be monitored through the LINE OUT terminal(see page 7) because the line short is removed in recording.

(2) Recording memory
Recording memory is set to ON when the tape counter is reset at the record start point.

IC701 mechanism controller M50747-B83SP

The mechanism deck is controlled by receiving data from IC702 (system controller).

Pin No.	Pin Name	I/O	Description
1	Vcc	—	Power supply terminal(+5.6 V).
2	BCTRQ	O	Assist motor torque control output. "H": Large torque "L": Small torque
3	SPEED	O	Not used(open).
4	TYPE 1	O	REC EQ select output. NORMAL tape: "H"
5	TYPE 2	O	REC EQ select output. CrO2 tape: "H"
6～9		O	Not used.
10	$\overline{\text{REVTAB}}$	I	REC switch(reverse:S1009)input. "H": When REC claw is broken.
11	$\overline{70\mu s}$	I	70µswitch(S1008)input. "H": 70µs, "L": 120µs(time constant of playback EQ).
12	$\overline{\text{METAL}}$	I	METAL switch(S1007)input. "H": METAL tape, "L": NORMAL or CrO2 tape.
13	$\overline{\text{HALF}}$	I	HALF switch(S1006)input. "L": When a tape is mounted.
14	S REEL	I	Supply reel base sensor(IC1001)input.
15	T REEL	I	Take-up reel base sensor(IC1002)input.
16,17		I	Not used(GND).
18		—	Not used(open).
19	SCLK	I	Data transmission clock input from IC702.
20	SO	O	Serial data output to IC702.
21	SI	I	Serial data input from IC702.
22	REQ	O	Data request output to IC702.
23～25		—	Not used(open).
26	$\overline{\text{INT}}$	I	Not used(+5.6 V).
27	CN Vss	—	Power supply terminal(GND).
28	$\overline{\text{RES}}$	I	Reset input. "L": Reset.
29	XIN	I	Clock input(4 MHz).
30	XOUT	O	Clock output.
31	ϕ		Not used.
32	Vss	—	Power supply terminal(GND).
33～50			Not used.

Pin No.	Pin Name	I/O	Description
51	ASSIST1	O	Head base is"H" when turned to the FWD direction. *1
52	ASSIST2	O	Head base is"H" when turned to the RVS direction.
53	REEL 1	O	Reel motor·rotation control output. Reverse: "H" *2
54	REEL 2	O	Reel motor rotation control output. Forward: "H"
55	TQ1	O	Reel motor torque control output. PLAY: "H" *3
56	TQ2	O	Reel motor torque control output. FF/REW: "H"
57~60	CAM1-4	I	Rotary encoder input to detect the position of the head base of the mechanical block. *4
61	$\overline{\text{OPEN}}$	I	OPEN switch(S1004)input. "L": When the cassette holder completely opens.
62	$\overline{\text{CLOSE}}$	I	CLOSE switch(S1003)input. "L": When the cassette holder completely closed.
63	$\overline{\text{DOOR}}$	I	DOOR switch(S1002)input. "L": When the cassette holder is driven from open to close state.
64	$\overline{\text{FWDTAB}}$	I	REC switch (forward : S1005) input. "H" : When REC claw is broken.

*1

	STOP	Turn to FWD directiom	Turn to RVS direction	STOP
$\overline{\text{ASSIST 1}}$	L	H	L	H
$\overline{\text{ASSIST 2}}$	L	L	H	H

*2

	STOP	FWD/CLOSE	REV/OPEN	BRAKE
REEL 1	L	L	H	H
REEL 2	L	H	L	H

*3

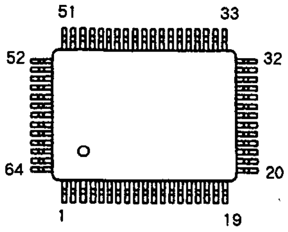
	OPEN/CLOSE (large torque)	FF/REW (medium torque)	PLAY (small torque)	INHIBIT
TQ 1	L	L	H	H
TQ 2	L	H	L	H

*4

	Forward					Reverse			
	FWD PLAY	AMS/PAUSE	STOP	FF/REW	EJECT	FF/REW	STOP	AMS/PAUSE	RVS PLAY
CAM1	H	H	L	H	L	H	L	H	H
CAM2	H	L	H	H	L	H	H	L	H
CAM3	H	H	H	H	H	L	L	L	L
CAM4	H	H	H	L	L	L	H	H	H

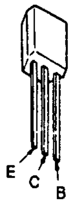
5-2. SEMICONDUCTOR LEAD LAYOUTS

HD614023FA89

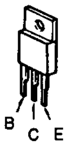

51
33
52
32
64
20
1
19

(TOP VIEW)

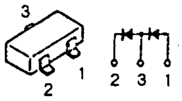
DTA114ES
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SA1344



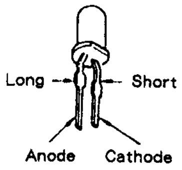
2SB1094-L
2SD2012



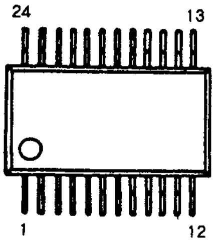
DCA010



SEL2210S-C

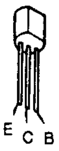

Long
Short
Anode
Cathode

M50760-315FP

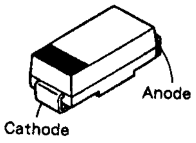


(TOP VIEW)

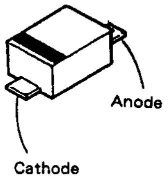
2SC945-P
2SC3330-T



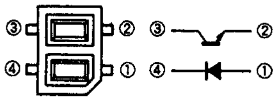
EC10DS2


Anode
Cathode

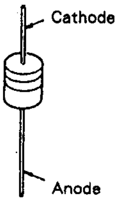
1SS355


Anode
Cathode

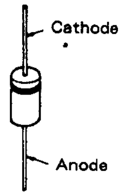
GP2S22B



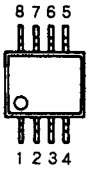
HZS7C2L
RD5.6ESB2
1SS120


Cathode
Anode

10E2N

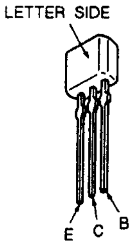

Cathode
Anode

M5218AFP

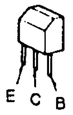


(TOP VIEW)

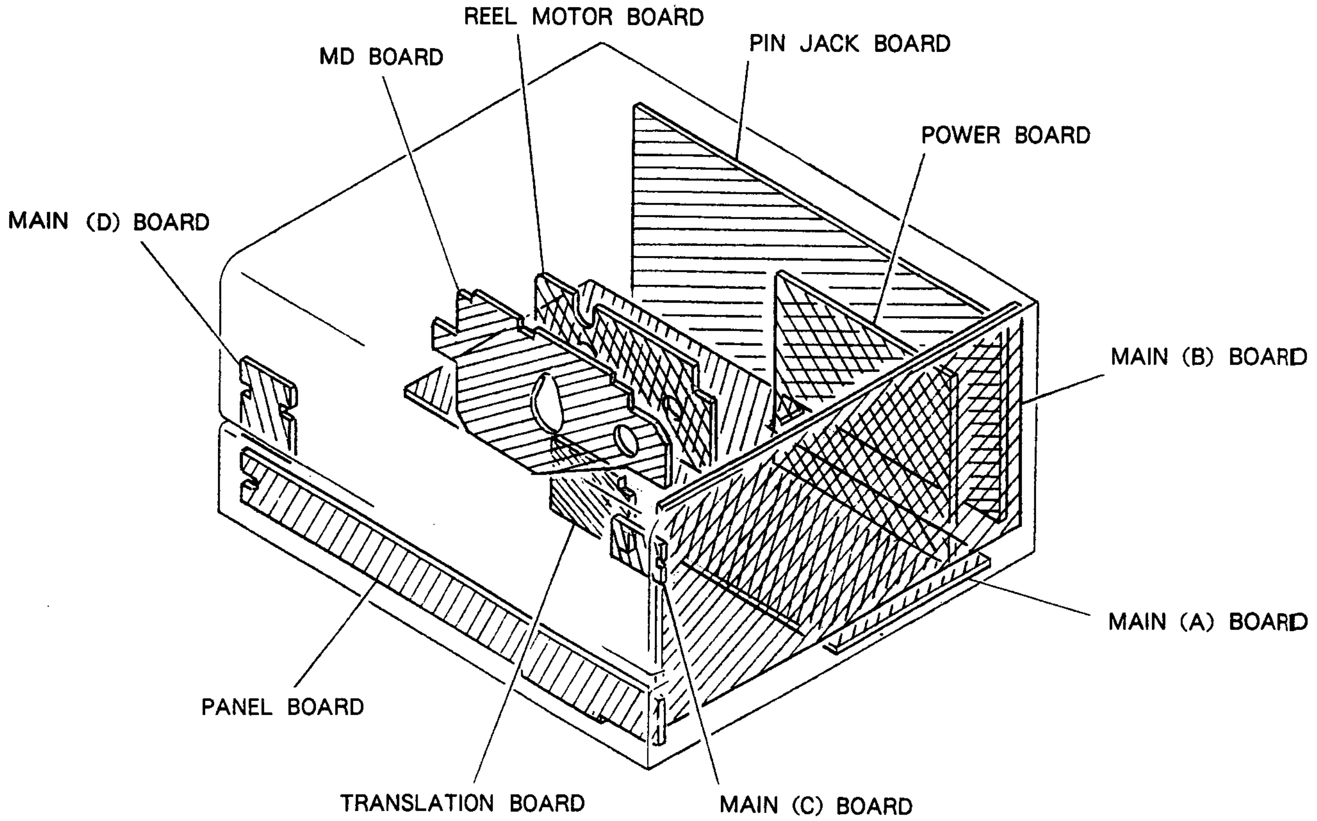
2SA1317-STN
2SD1012-FG


LETTER SIDE
E
C
B

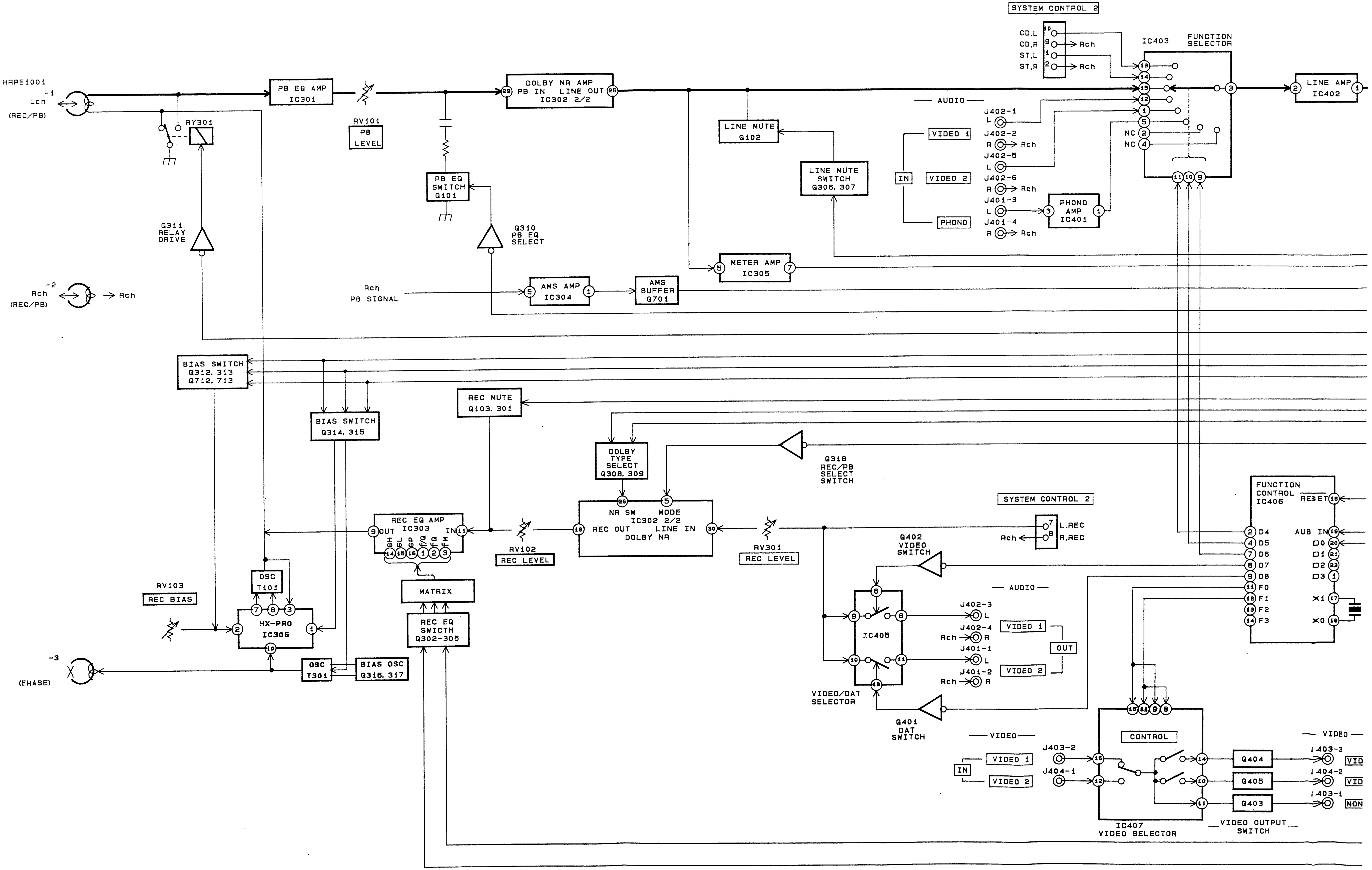
2SD774-34



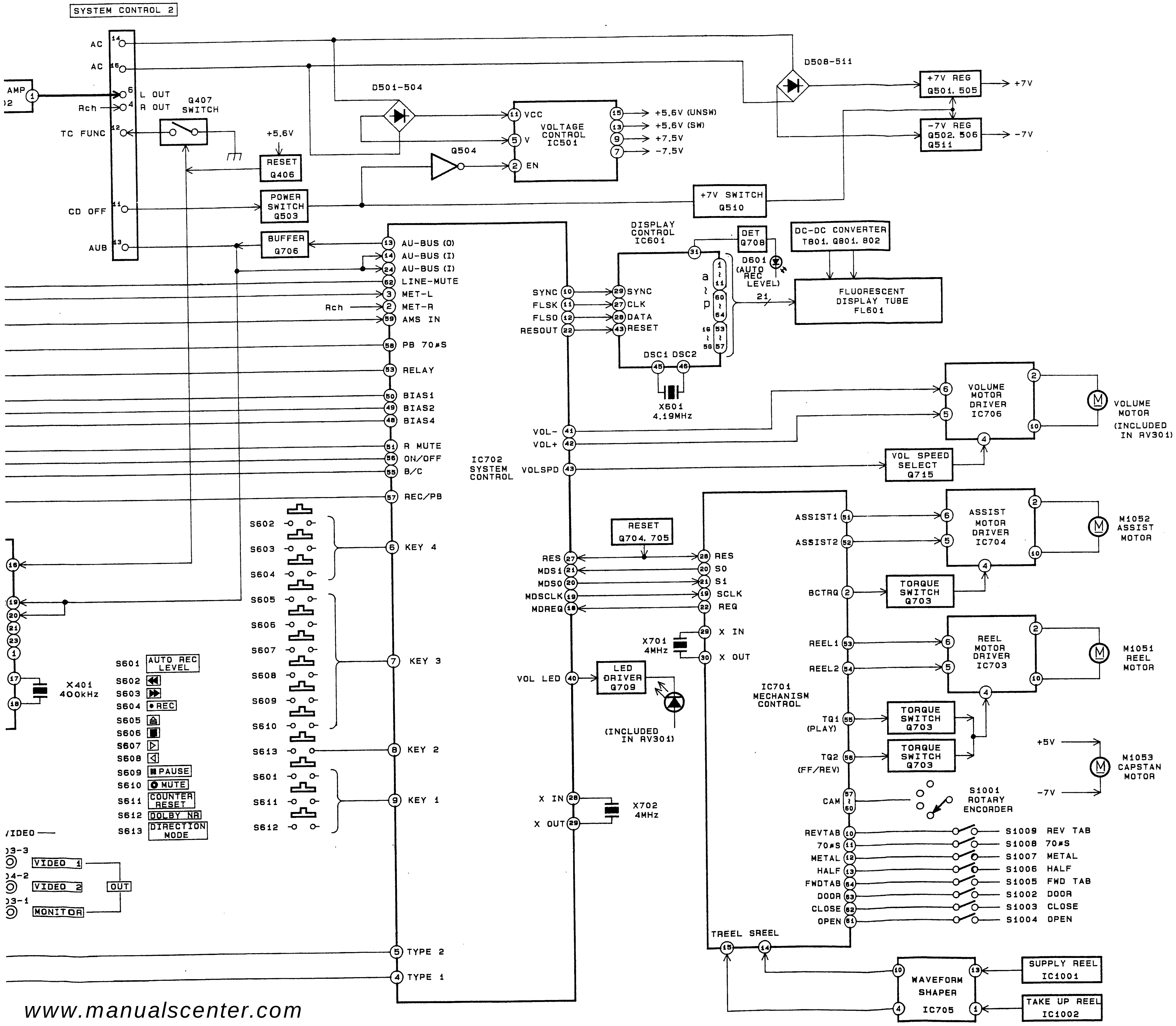
5-3. CRICUIT BOARDS LOCATION


REEL MOTOR BOARD
MD BOARD
PIN JACK BOARD
POWER BOARD
MAIN (D) BOARD
MAIN (B) BOARD
MAIN (A) BOARD
PANEL BOARD
TRANSLATION BOARD
MAIN (C) BOARD

5-4. BLOCK DIAGRAM

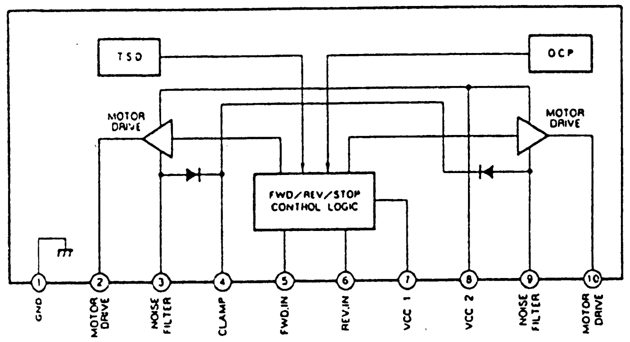

SYSTEM CONTROL 2
CD.L
CD.R
ST.L
ST.R
Rch
IC403
FUNCTION SELECTOR
LINE AMP
IC402
HRPE1001
-1
Lch
(REC/PB)
RY301
PB EQ AMP
IC301
RV101
PB LEVEL
DOLBY NR AMP
PB IN
LINE OUT
IC302 2/2
LINE MUTE
Q102
AUDIO
J402-1
L
VIDEO 1
J402-2
R
J402-5
IN
VIDEO 2
J402-6
LINE MUTE SWITCH
Q306, 307
J401-3
PHONO
J401-4
PHONO AMP
IC401
NC
PB EQ SWITCH
Q101
Q311
RELAY DRIVE
Q310
PB EQ SELECT
METER AMP
IC305
-2
Rch
(REC/PB)
PB SIGNAL
AMS AMP
IC304
AMS BUFFER
Q701
BIAS SWITCH
Q312, 313
Q712, 713
REC MUTE
Q103, 301
BIAS SWITCH
Q314, 315
DOLBY TYPE SELECT
Q308, 309
Q318
REC/PB SELECT SWITCH
FUNCTION CONTROL
IC406
RESET
SYSTEM CONTROL 2
REC EQ AMP
OUT
IC303
IN
RV102
REC LEVEL
NR SW
MODE
IC302 2/2
REC OUT
LINE IN
DOLBY NR
RV301
REC LEVEL
L.REC
R.REC
Q402
VIDEO SWITCH
D4
D5
D6
D7
D8
F0
F1
F2
F3
AUB IN
D0
D1
D2
D3
X1
X0
RV103
REC BIAS
OSC
T101
HX-PRO
IC306
MATRIX
REC EQ SWICTH
Q302-305
J402-3
J402-4
IC405
VIDEO 1
OUT
J401-1
J401-2
VIDEO 2
-3
(EHASE)
OSC
T301
BIAS OSC
Q316, 317
VIDEO/DAT SELECTOR
Q401
DAT SWITCH
VIDEO
J403-2
J404-1
CONTROL
Q404
Q405
Q403
J403-3
J404-2
J403-1
VID
MON
IC407
VIDEO SELECTOR
VIDEO OUTPUT SWITCH

16

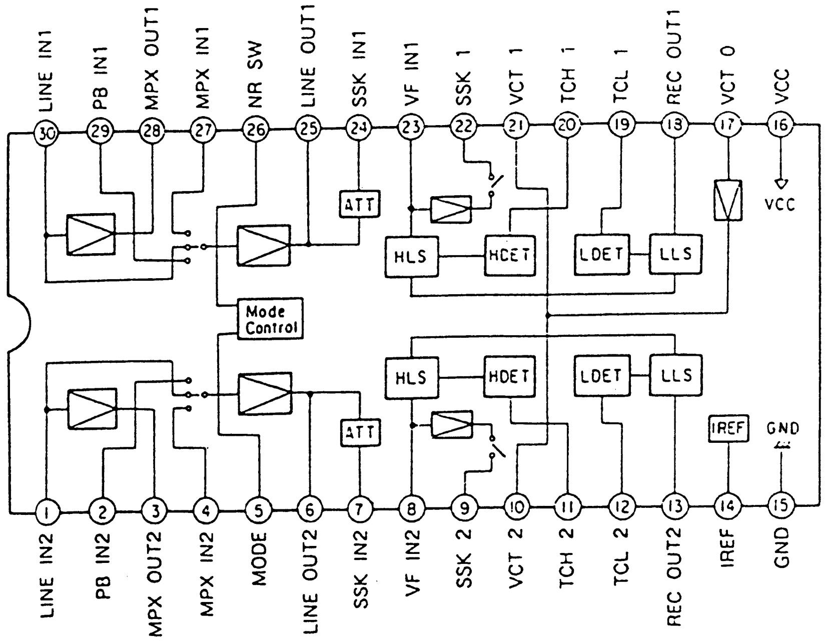

SYSTEM CONTROL 2
AC
AC
AMP
L OUT
R OUT
Rch
TC FUNC
Q407 SWITCH
+5.6V
RESET Q406
CD OFF
POWER SWITCH Q503
AUB
BUFFER Q706
D501-504
VCC
VOLTAGE CONTROL IC501
V
EN
Q504
+5.6V (UNSW)
+5.6V (SW)
+7.5V
-7.5V
D508-511
+7V REG Q501, 505
+7V
-7V REG Q502, 506 Q511
-7V
+7V SWITCH Q510
AU-BUS (O)
AU-BUS (I)
AU-BUS (I)
LINE-MUTE
MET-L
MET-R
Rch
AMS IN
PB 70μS
RELAY
BIAS1
BIAS2
BIAS4
R MUTE
ON/OFF
B/C
REC/PB
DISPLAY CONTROL IC601
DET Q708
D601 (AUTO REC LEVEL)
DC-DC CONVERTER T801, Q801, 802
FLUORESCENT DISPLAY TUBE FL601
SYNC
FLSK
FLSO
RESOUT
SYNC
CLK
DATA
RESET
a
p
21
DSC1 DSC2
X601 4.19MHz
VOLUME MOTOR DRIVER IC706
VOLUME MOTOR (INCLUDED IN RV301)
VOL-
VOL+
IC702 SYSTEM CONTROL
VOLSPD
VOL SPEED SELECT Q715
ASSIST MOTOR DRIVER IC704
M1052 ASSIST MOTOR
ASSIST1
ASSIST2
BCTRQ
TORQUE SWITCH Q703
REEL MOTOR DRIVER IC703
M1051 REEL MOTOR
REEL1
REEL2
TORQUE SWITCH Q703
TORQUE SWITCH Q703
TQ1 (PLAY)
TQ2 (FF/REV)
+5V
M1053 CAPSTAN MOTOR
-7V
CAM
S1001 ROTARY ENCORDER
REVTAB
70μS
METAL
HALF
FWDTAB
DOOR
CLOSE
OPEN
S1009 REV TAB
S1008 70μS
S1007 METAL
S1006 HALF
S1005 FWD TAB
S1002 DOOR
S1003 CLOSE
S1004 OPEN
TREEL SREEL
WAVEFORM SHAPER IC705
SUPPLY REEL IC1001
TAKE UP REEL IC1002
RESET Q704, 705
RES
MDS1
MDS0
MDSCLK
MDREQ
RES
S0
S1
SCLK
REQ
X IN
X OUT
X701 4MHz
IC701 MECHANISM CONTROL
VOL LED
LED DRIVER Q709
(INCLUDED IN RV301)
X IN
X OUT
X702 4MHz
S602
S603
S604
KEY 4
S605
S606
S607
S608
S609
S610
KEY 3
S613
KEY 2
S601
S611
S612
KEY 1
TYPE 2
TYPE 1
S601 AUTO REC LEVEL
S602 ◀◀
S603 ▶▶
S604 ● REC
S605 ⏏
S606 ■
S607 ▷
S608 ◁
S609 ‖ PAUSE
S610 ● MUTE
S611 COUNTER RESET
S612 DOLBY NR
S613 DIRECTION MODE
X401 400kHz
VIDEO
VIDEO 1
VIDEO 2
MONITOR
OUT

• IC BLOCK DIAGRAM

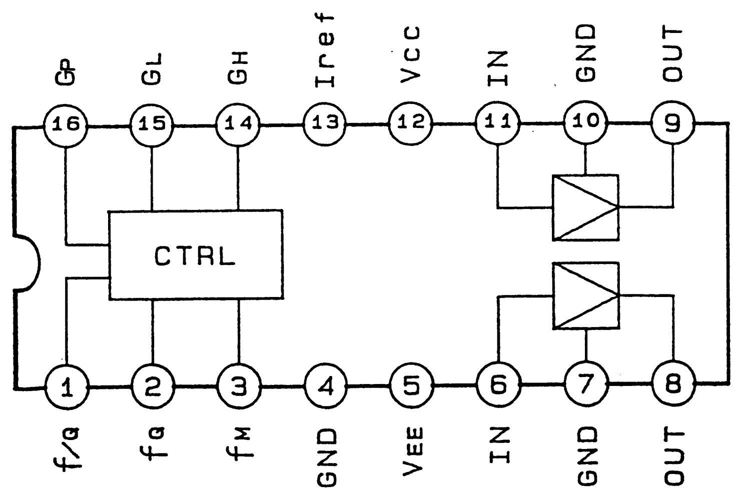
IC703,706 BA6219B
IC704 LB1641


TSD
OCP
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTROL LOGIC
1 GND
2 MOTOR DRIVE
3 NOISE FILTER
4 CLAMP
5 FWDIN
6 REVIN
7 VCC 1
8 VCC 2
9 NOISE FILTER
10 MOTOR DRIVE

IC302 CXA1330S


30 LINE IN1
29 PB IN1
28 MPX OUT1
27 MPX IN1
26 NR SW
25 LINE OUT1
24 SSK IN1
23 VF IN1
22 SSK 1
21 VCT 1
20 TCH 1
19 TCL 1
18 REC OUT1
17 VCT 0
16 VCC
ATT
HLS
HCET
LDET
LLS
VCC
Mode Control
HLS
HDET
LDET
LLS
ATT
IREF
GND
1 LINE IN2
2 PB IN2
3 MPX OUT2
4 MPX IN2
5 MODE
6 LINE OUT2
7 SSK IN2
8 VF IN2
9 SSK 2
10 VCT 2
11 TCH 2
12 TCL 2
13 REC OUT2
14 IREF
15 GND

IC303 CXA1198AP


16 GP
15 GL
14 GH
13 Iref
12 Vcc
11 IN
10 GND
9 OUT
CTRL
1 f/Q
2 fQ
3 fM
4 GND
5 VEE
6 IN
7 GND
8 OUT

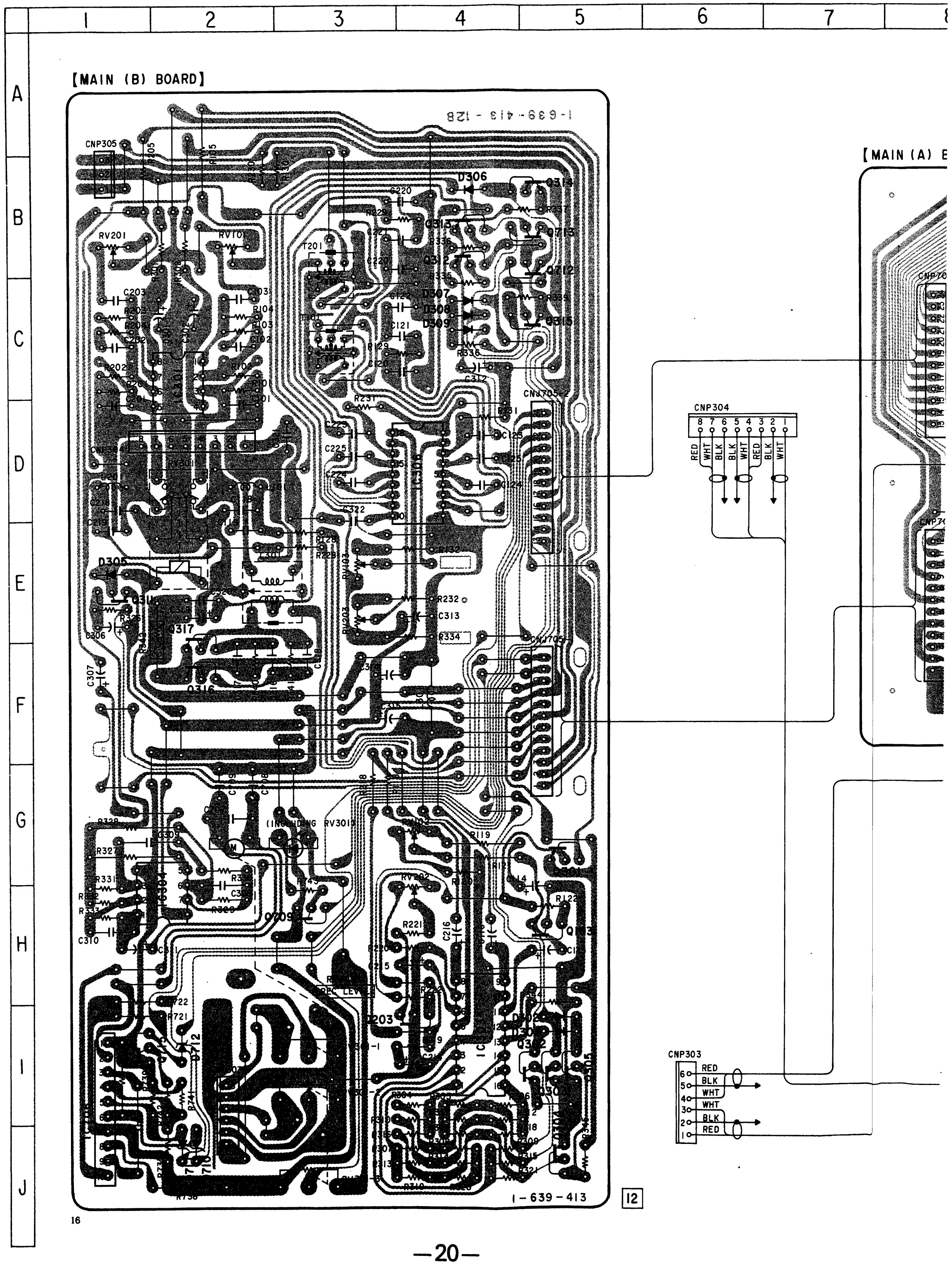
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C-12	Q306	D-11
D201	C-13	Q307	E-11
D301	I-5	Q308	F-11
D302	I-5	Q309	E-11
D303	E-11	Q310	E-11
D304	E-11	Q311	E-1
D305	E-1	Q312	B-4
D306	B-4	Q313	B-4
D307	C-4	Q314	B-5
D308	C-4	Q315	C-5
D309	C-4	Q316	F-2
D601	A-20	Q317	E-2
D701	C-17	Q318	F-11
D702	C-17	Q701	F-13
D703	E-12	Q702	F-13
D704	E-12	Q703	E-13
D705	F-12	Q704	D-17
D706	F-12	Q705	C-17
D707	E-14	Q706	C-15
D708	E-14	Q707	C-17
D709	E-13	Q708	B-19
D710	J-2	Q709	H-3
D711	J-2	Q712	B-5
D712	I-2	Q713	B-5
D713	C-15	Q715	I-1
D714	C-17	Q801	B-13
D720	C-10	Q802	B-11
D721	C-11		
D722	C-12		
D750	B-13		
D751	D-14		
D752	B-19		
D753	A-19		
D801	D-16		
D802	C-15		
D803	C-15		
D804	C-14		
D805	C-14		
IC301	C-2		
IC302	E-9		
IC303	I-4		
IC304	H-2		
IC305	D-13		
IC306	D-4		
IC701	E-16		
IC702	B-15		
IC703	E-13		
IC704	D-13		
IC705	D-15		
IC706	I-1		
IC1001	H-18		
IC1002	H-19		
Q101	D-10		
Q102	D-11		
Q103	H-5		
Q201	F-10		
Q202	D-11		
Q203	I-4		
Q301	G-5		
Q302	I-5		
Q303	I-5		
Q304	J-5		
Q305	I-5		

Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.

5-5. PRINTED WIRING BOARDS – MAIN SECTION – • See page 14 for Semiconductor Lead Layouts and Circuit Boar


1
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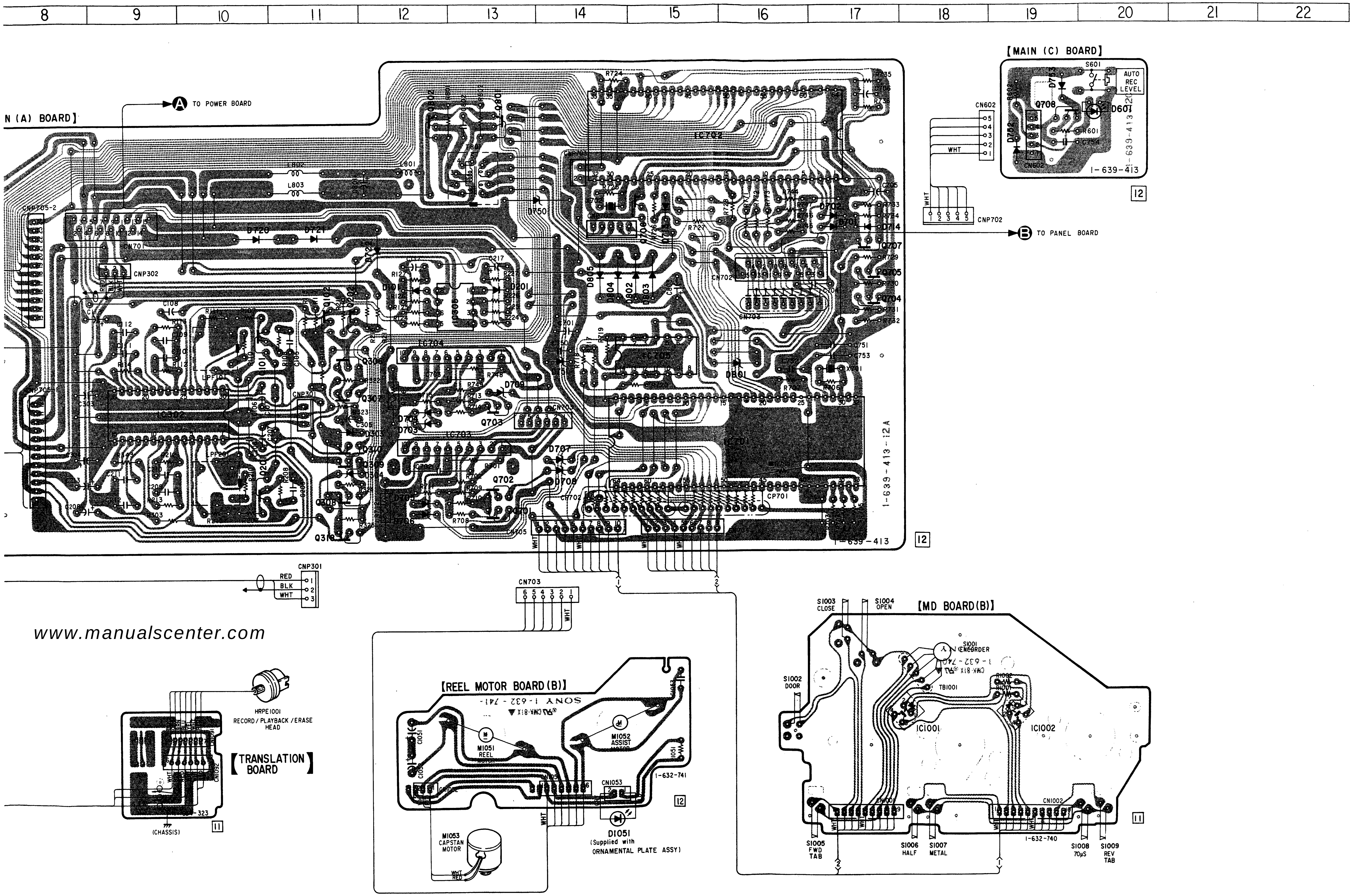
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
[MAIN (B) BOARD]
[MAIN (A) B
1-639-413-12B
CNP305
RV201
RV101
T201
D306
C220
Q314
Q313
Q312
Q713
Q712
D307
D308
D309
CNP705
CNP304
8 7 6 5 4 3 2 1
RED
WHT
BLK
BLK
WHT
RED
BLK
WHT
IC305
D305
Q311
Q317
R232
C313
R334
CNP705
Q316
C307
RV103
RV203
(INCLUDING RV301)
R119
RV302
R221
C216
R328
R329
R331
C310
Q709
Q203
REC LEVEL
Q713
D712
CNP303
6 RED
5 BLK
4 WHT
3 WHT
2 BLK
1 RED
1-639-413
12
16

it Boards Location.


8
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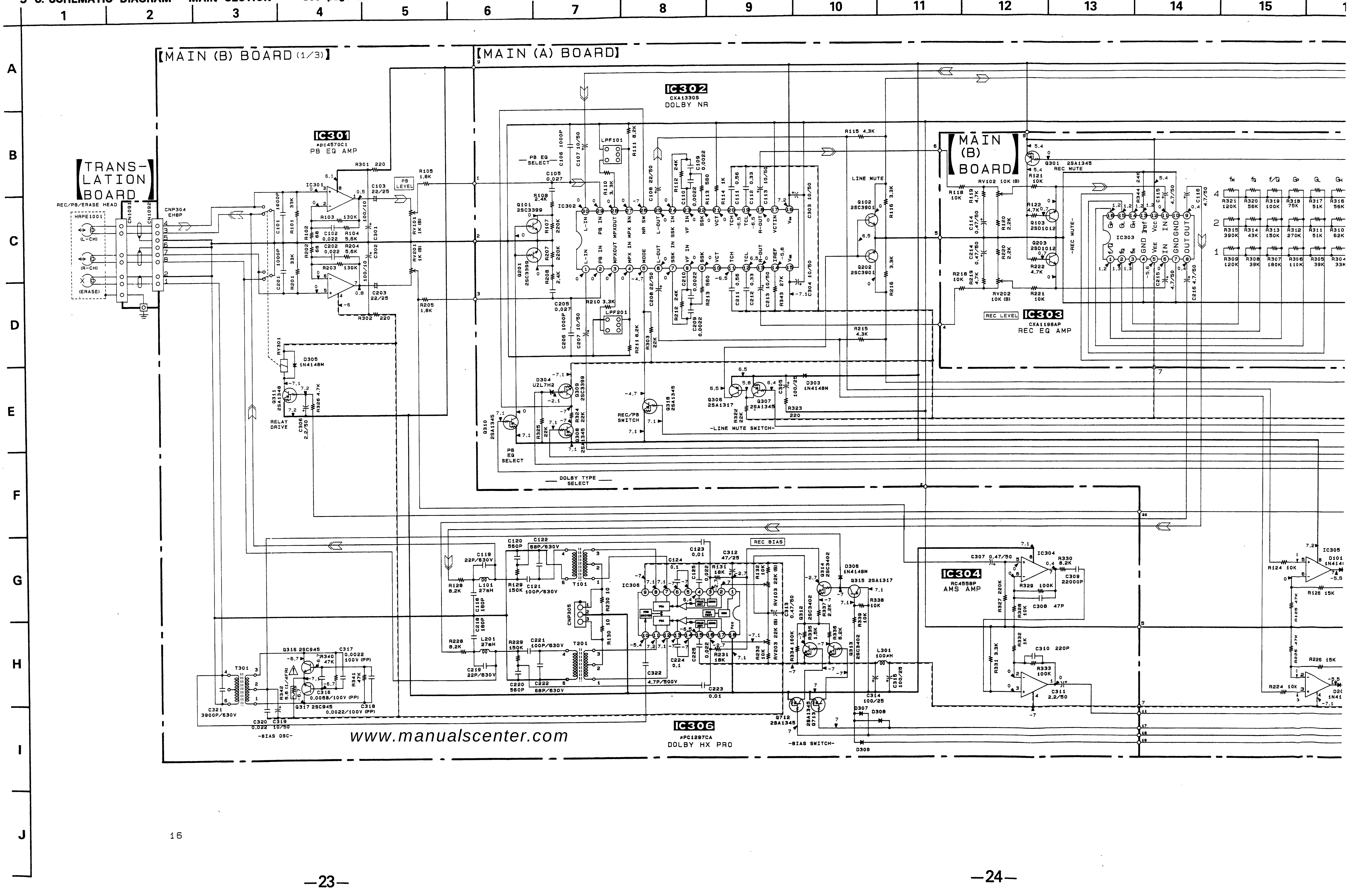
14
15
16
17
18
19
20
21
22
N (A) BOARD]
TO POWER BOARD
TO PANEL BOARD
[MAIN (C) BOARD]
S601
AUTO REC LEVEL
Q708
D601
R601
C754
CN602
1-639-413
12
CN602
CN702
WHT
IC702
IC704
IC703
IC705
IC302
IC701
Q703
Q702
D701
D705
D706
D707
D709
D750
D801
CP701
CN703
CN705
1-639-413-12A
1-639-413
12
CNP301
RED
BLK
WHT
CN703
[MD BOARD(B)]
S1003 CLOSE
S1004 OPEN
S1001 ENCORDER
S1002 DOOR
TB1001
IC1001
IC1002
CN1001
CN1002
S1005 FWD TAB
S1006 HALF
S1007 METAL
S1008 70µS
S1009 REV TAB
1-632-740
11
[REEL MOTOR BOARD (B)]
SONY 1-632-741
M1051 REEL MOTOR
M1052 ASSIST MOTOR
CN1051
CN1053
1-632-741
12
M1053 CAPSTAN MOTOR
D1051 (Supplied with ORNAMENTAL PLATE ASSY)
HRPE1001 RECORD/PLAYBACK/ERASE HEAD
[TRANSLATION BOARD]
(CHASSIS)
11

5-6. SCHEMATIC DIAGRAM – MAIN SECTION – • See page 28 for Note on Schematic Diagram.



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12
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14
15
A
B
C
D
E
F
G
H
I
J
[MAIN (B) BOARD (1/3)]
[MAIN (A) BOARD]
[TRANSLATION BOARD]
[MAIN (B) BOARD]
REC/PB/ERASE HEAD
HRPE1001
(L-CH)
(R-CH)
(ERASE)
CN1091
CN1092
CNP304
EH8P
IC301
μPC4570C1
PB EQ AMP
IC302
CXA1330S
DOLBY NR
IC303
CXA1198AP
REC EQ AMP
REC LEVEL
IC304
RC4558P
AMS AMP
IC305
IC306
μPC1297CA
DOLBY HX PRO
PB LEVEL
RV101 1K (B)
RV201 1K (B)
LPF101
LPF201
PB EQ SELECT
LINE MUTE
-LINE MUTE SWITCH-
REC/PB SWITCH
RELAY DRIVE
RY301
D305 1N4148M
Q311 2SA1348
Q310 2SA1345
Q309 2SC3399
Q308 2SA1345
D304 UZL7H2
Q318 2SA1345
Q101 2SC3399
Q201 2SC3399
Q102 2SC3901
Q202 2SC3901
Q306 2SA1317
Q307 2SA1345
D303 1N4148M
Q301 2SA1345
REC MUTE
Q103 2SD1012
Q203 2SD1012
-REC MUTE-
RV102 10K (B)
RV202 10K (B)
DOLBY TYPE SELECT
REC BIAS
T101
T201
L101 27mH
L201 27mH
CNP305
RV103 22K (B)
RV203 22K (B)
Q314 2SC3402
Q312 2SC3402
Q313 2SC3402
Q315 2SA1317
D306 1N4148M
L301 100μH
Q712 2SA1345
Q713 2SA1345
-BIAS SWITCH-
D307
D308
D309
T301
Q316 2SC945
Q317 2SC945
-BIAS OSC-
C321 3900P/630V
fH
fQ
f/Q
GP
GL
GH

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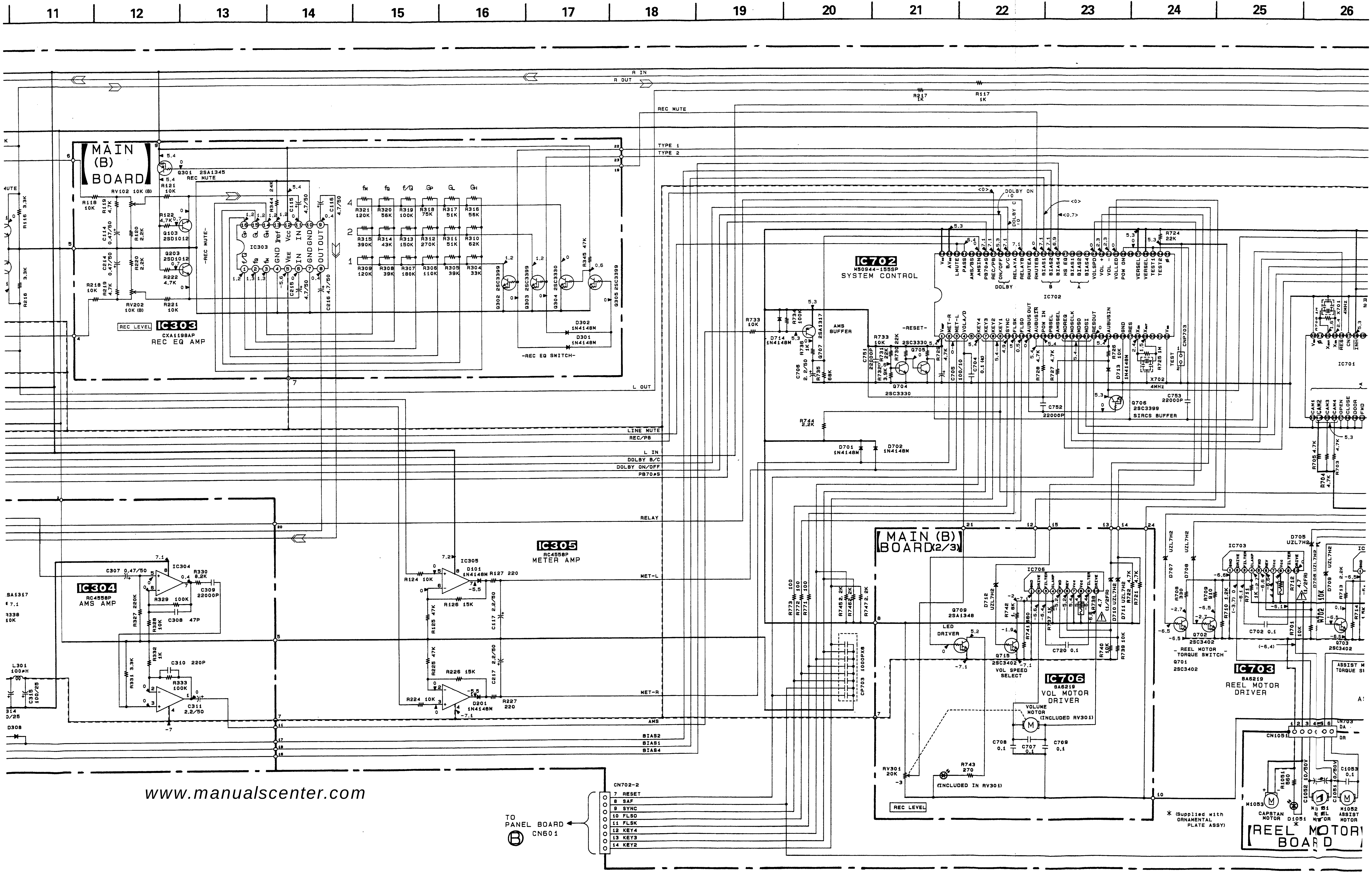
16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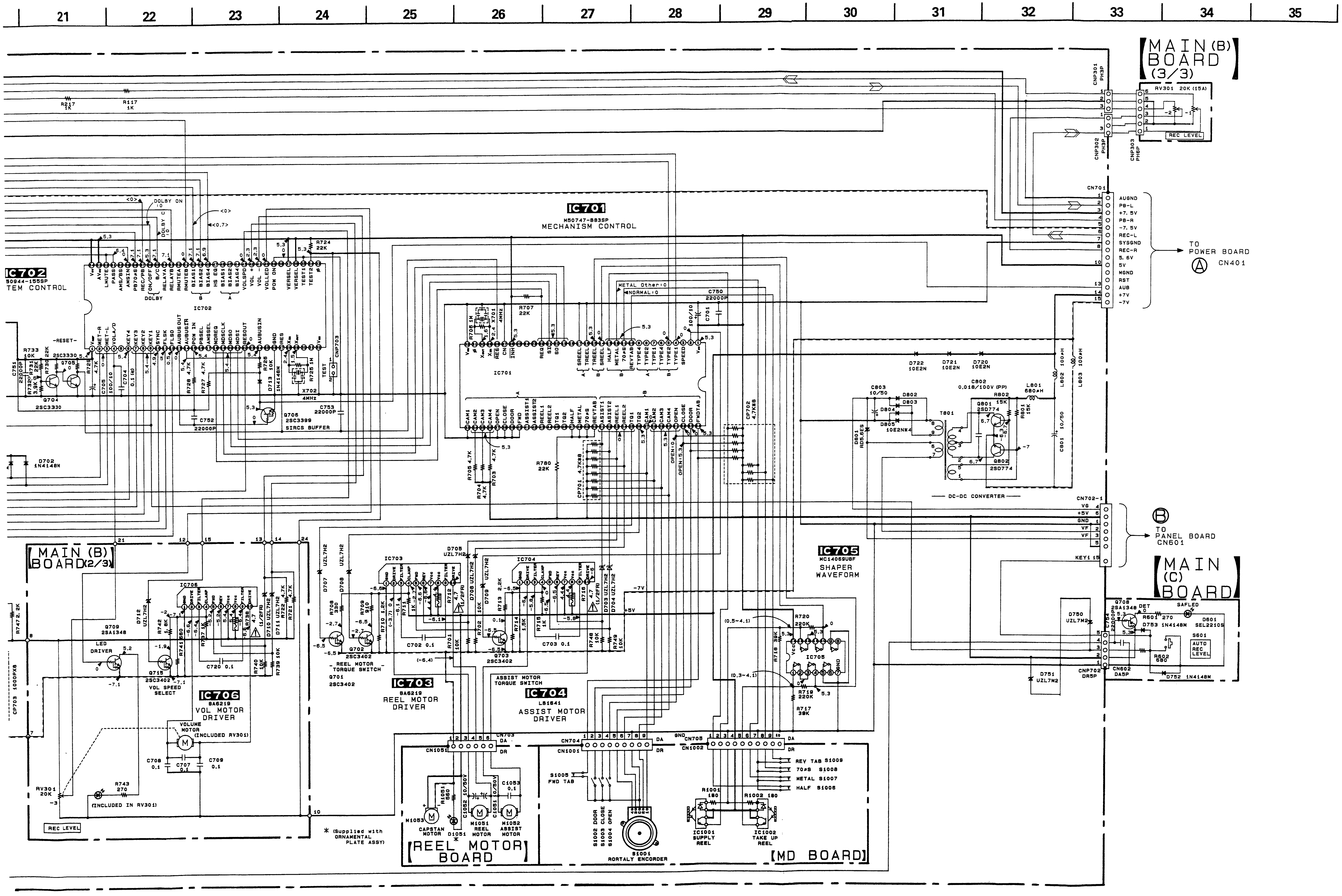
24
25
26
MAIN (B) BOARD
IC303
CXA1198AP
REC EQ AMP
REC LEVEL
Q301 2SA1345
REC MUTE
Q103 2SD1012
Q203 2SD1012
-REC MUTE-
Q302 2SC3399
Q303 2SC3399
Q304 2SC3330
Q305 2SC3399
D302 1N4148M
D301 1N4148M
-REC EQ SWITCH-
R IN
R OUT
REC MUTE
TYPE 1
TYPE 2
L OUT
LINE MUTE
REC/PB
L IN
DOLBY B/C
DOLBY ON/OFF
PB70#S
RELAY
MET-L
MET-R
AMS
BIAS2
BIAS1
BIAS4
IC702
M50944-155SP
SYSTEM CONTROL
Q707 2SA1317
AMS BUFFER
Q704 2SC3330
Q705 2SC3330
Q706 2SC3399
SIRCS BUFFER
X702 4MHz
X701
D701 1N4148M
D702 1N4148M
D714 1N4148M
IC701
IC304
RC4558P
AMS AMP
IC305
RC4558P
METER AMP
D101 1N4148M
D201 1N4148M
L301 100μH
MAIN (B) BOARD (2/3)
Q709 2SA1348
LED DRIVER
Q715 2SC3402
VOL SPEED SELECT
IC706
BA6219
VOL MOTOR DRIVER
VOLUME MOTOR (INCLUDED RV301)
RV301 20K
(INCLUDED IN RV301)
REC LEVEL
CP703 1000PX8
IC703
BA6219
REEL MOTOR DRIVER
Q701 2SC3402
Q702 2SC3402
Q703 2SC3402
- REEL MOTOR TORQUE SWITCH -
ASSIST MOTOR TORQUE SWITCH
CN1051
CN703
M1053 CAPSTAN MOTOR
D1051
M1051 REEL MOTOR
M1052 ASSIST MOTOR
* (Supplied with ORNAMENTAL PLATE ASSY)
REEL MOTOR BOARD
CN702-2
7 RESET
8 SAF
9 SYNC
10 FLSO
11 FLSK
12 KEY4
13 KEY3
14 KEY2
TO PANEL BOARD B CN601


21
22
23
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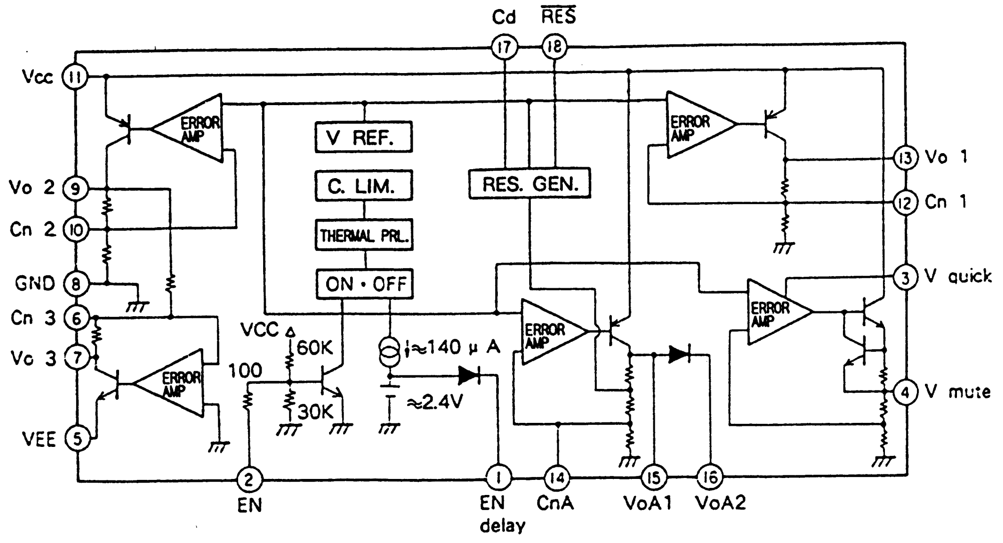
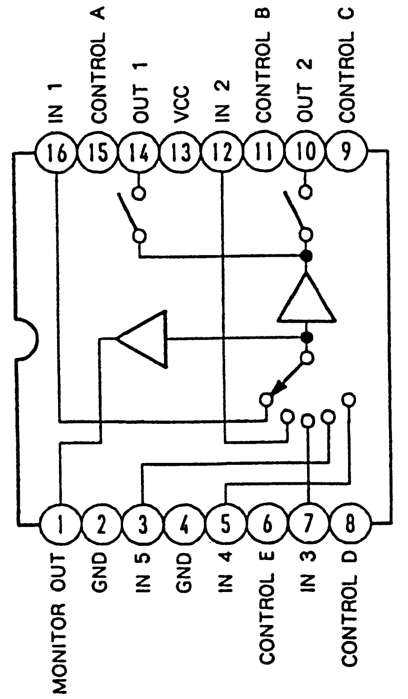
32
33
34
35
MAIN (B) BOARD (3/3)
CNP301 PH3P
CNP302 PH3P
CNP303 PH6P
RV301 20K (15A)
REC LEVEL
R217 1K
R117 1K
IC701
M50747-883SP
MECHANISM CONTROL
IC702
50944-155SP
TEM CONTROL
DOLBY ON
DOLBY
-RESET-
Q704 2SC3330
Q705
Q706 2SC3399
SIRCS BUFFER
X702 4MHz
X701 4MHz
C752 22000P
C753 22000P
C750 22000P
R724 22K
R707 22K
R780 22K
METAL Other:0
NORMAL:0
CN701
AUGND
PB-L
+7.5V
PB-R
-7.5V
REC-L
SYSGND
REC-R
5.6V
5V
MGND
RST
AUB
+7V
-7V
TO POWER BOARD
Ⓐ CN401
D722 10E2N
D721 10E2N
D720 10E2N
C802 0.018/100V (PP)
L801 680μH
L802 100μH
L803 100μH
R802 15K
R801 15K
C803 10/50
Q801 2SD774
Q802 2SD774
T801
D801 RD5.6ES
C801 10/50
DC-DC CONVERTER
CP702 4.7K×8
CP701 4.7K×8
CN702-1
VG
+5V
GND
VF
VF
KEY1
Ⓑ
TO PANEL BOARD CN601
IC705
MC14069UBF
SHAPER WAVEFORM
MAIN (C) BOARD
Q708 SA1348
DET
SAFLED
R601 270
D753 1N4148M
D601 SEL2210S
S601
AUTO REC LEVEL
R602 680
D752 1N4148M
CNP702 DA5P
CN602 DA5P
D750 UZL7M2
D751 UZL7M2
MAIN (B) BOARD (2/3)
IC706
BA6219
VOL MOTOR DRIVER
Q709 2SA1348
LED DRIVER
Q715 2SC3402
VOL SPEED SELECT
VOLUME MOTOR (INCLUDED RV301)
C708 0.1
C707 0.1
C709 0.1
RV301 20K
R743 270
(INCLUDED IN RV301)
REC LEVEL
CP703 1000PX6
R747 2.2K
D702 1N4148M
IC703
BA6219
REEL MOTOR DRIVER
Q701 2SC3402
Q702 2SC3402
Q703 2SC3402
REEL MOTOR TORQUE SWITCH
ASSIST MOTOR TORQUE SWITCH
IC704
LB1641
ASSIST MOTOR DRIVER
C702 0.1
C703 0.1
C720 0.1
D705 UZL7H2
D707 UZL7H2
D708 UZL7H2
D709 UZL7H2
D710 UZL7H2
D711 UZL7H2
D712 UZL7H2
D703 UZL7H2
D704 UZL7H2
R720 220K
R719 220K
R718 39K
R717 39K
CN703 DA
CN1051
CN704
CN1001
CN705
CN1002
DA
DR
GND
REEL MOTOR BOARD
M1053 CAPSTAN MOTOR
D1051
M1051 REEL MOTOR
M1052 ASSIST MOTOR
R1051 560
C1052 10/50V
C1051 10/50V
C1053 0.1
* (Supplied with ORNAMENTAL PLATE ASSY)
S1005 FWD TAB
S1002 DOOR
S1003 CLOSE
S1004 OPEN
S1001 RORTALY ENCODER
R1001 180
R1002 180
IC1001 SUPPLY REEL
IC1002 TAKE UP REEL
REV TAB S1009
70μS S1008
METAL S1007
HALF S1006
MD BOARD

- **IC BLOCK DIAGRAM**

IC501 LA5603


Cd
RES
17
18
Vcc 11
Vo 2 9
Cn 2 10
GND 8
Cn 3 6
Vo 3 7
VEE 5
ERROR AMP
V REF.
C. LIM.
THERMAL PRL.
ON • OFF
RES. GEN.
VCC
60K
30K
100
≈140 μ A
≈2.4V
13 Vo 1
12 Cn 1
3 V quick
4 V mute
2 EN
1 EN delay
14 CnA
15 VoA1
16 VoA2

IC407 BA7625


IN 1
CONTROL A
OUT 1
VCC
IN 2
CONTROL B
OUT 2
CONTROL C
16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
MONITOR OUT
GND
IN 5
GND
IN 4
CONTROL E
IN 3
CONTROL D

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹⁄₄W or less unless otherwise specified.
- : fusible resistor.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

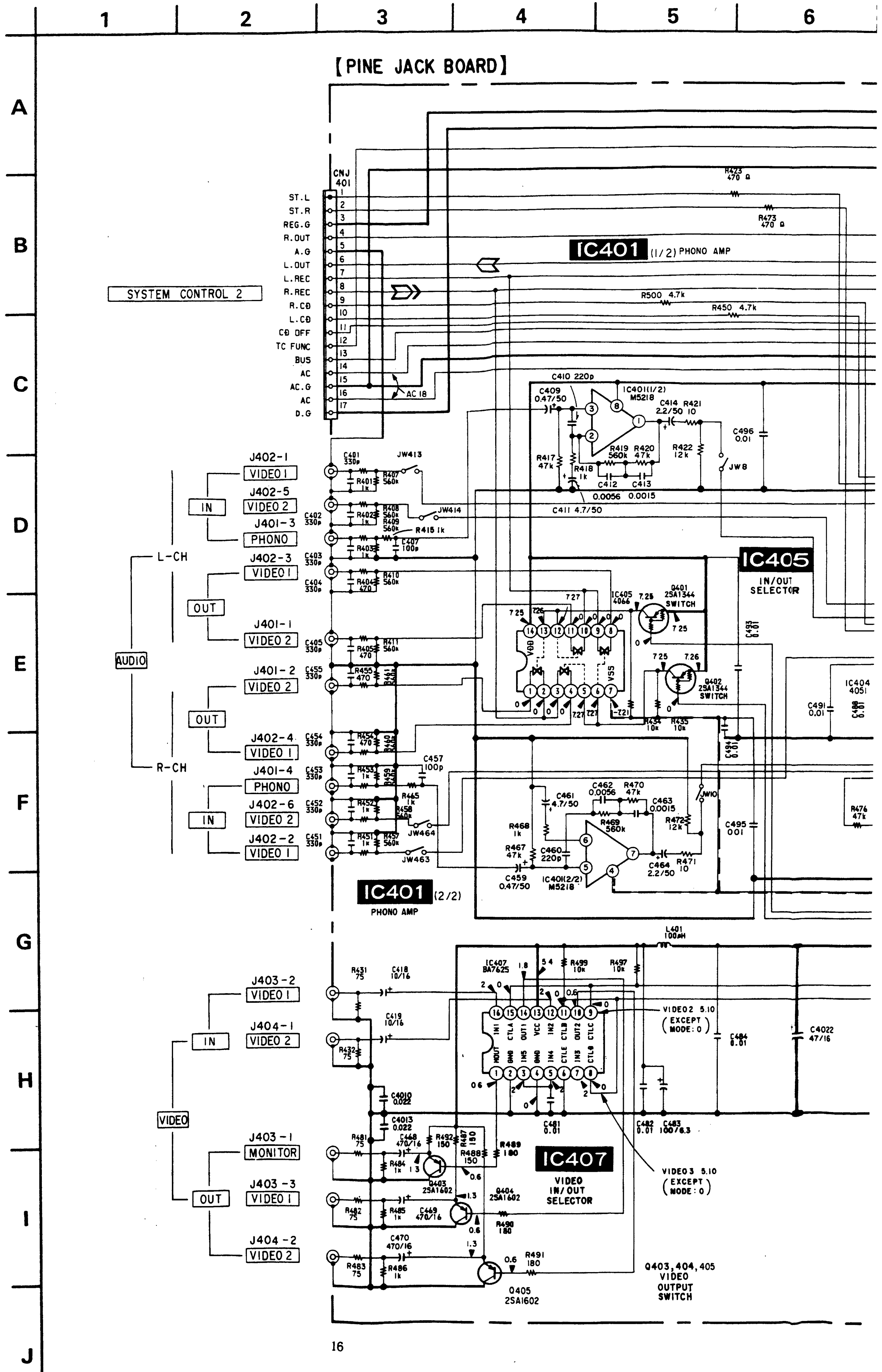
- ━━ : B+ Line
- ▬ ▬ : B– Line
- ☐ : adjustment for repair.

no mark : STOP
( ): PB
< >: REC

- Voltages are taken with a VOM (50 kΩ/V). Voltage variations may be noted due to normal production tolerances.
- Signal path.

▷ : PB
▷▷ : REC

5-7. SCHEMATIC DIAGRAM – PIN JACK SECTION –


1
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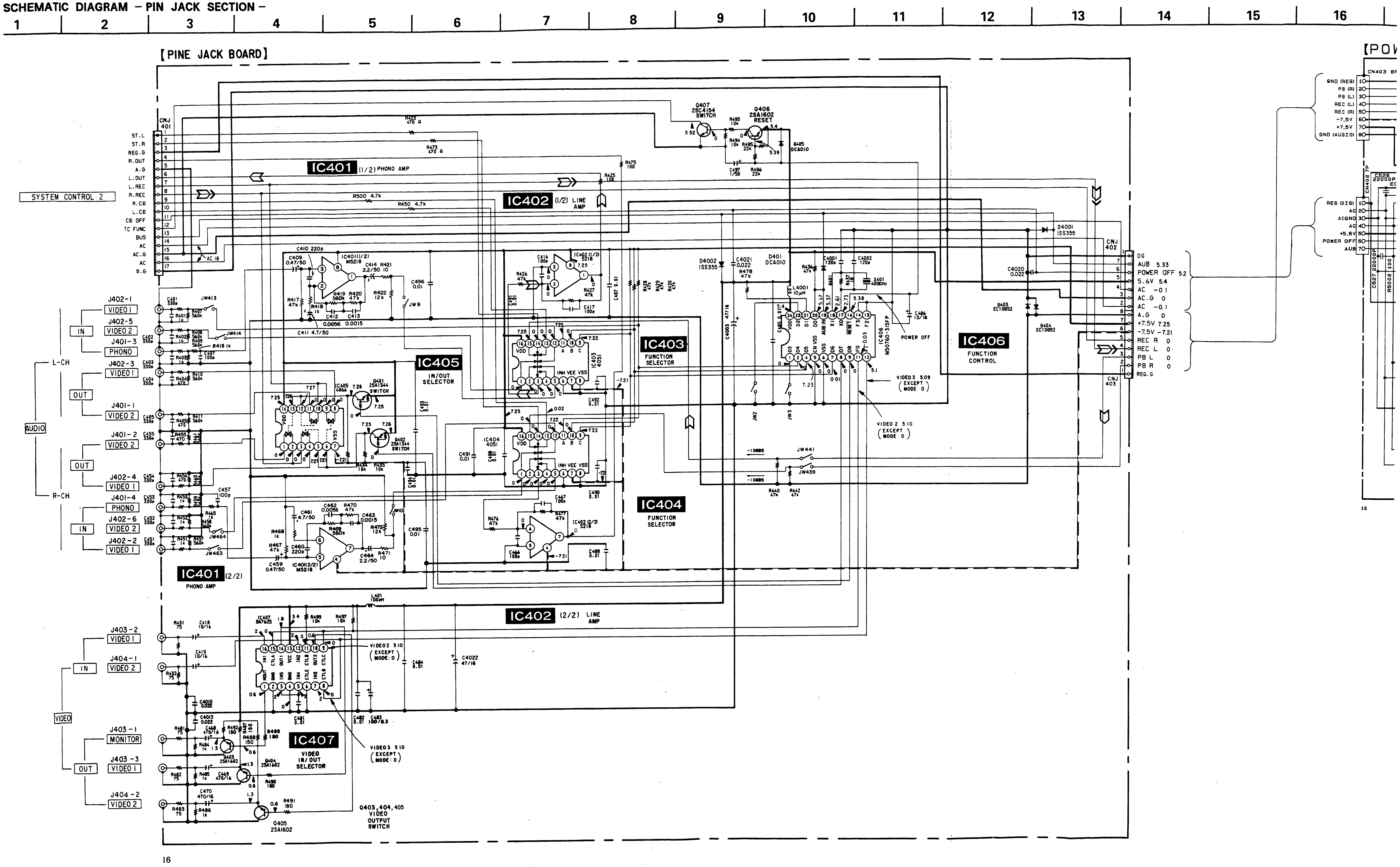
6
A
B
C
D
E
F
G
H
I
J
[PINE JACK BOARD]
CNJ 401
ST.L
ST.R
REG.G
R.OUT
A.G
L.OUT
L.REC
R.REC
R.CD
L.CD
CD OFF
TC FUNC
BUS
AC
AC.G
AC
D.G
SYSTEM CONTROL 2
IC401 (1/2) PHONO AMP
IC401 (2/2) PHONO AMP
IC405 IN/OUT SELECTOR
IC407 VIDEO IN/OUT SELECTOR
AUDIO
VIDEO
L-CH
R-CH
IN
OUT
J402-1 VIDEO 1
J402-5 VIDEO 2
J401-3 PHONO
J402-3 VIDEO 1
J401-1 VIDEO 2
J401-2 VIDEO 2
J402-4 VIDEO 1
J401-4 PHONO
J402-6 VIDEO 2
J402-2 VIDEO 1
J403-2 VIDEO 1
J404-1 VIDEO 2
J403-1 MONITOR
J403-3 VIDEO 1
J404-2 VIDEO 2
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
Q403 2SA1602
Q404 2SA1602
Q405 2SA1602
Q403,404,405 VIDEO OUTPUT SWITCH
IC401(1/2) M5218
IC401(2/2) M5218
IC405 4066
IC407 BA7625
IC404 4051
L401 100μH
VIDEO2 5.10 (EXCEPT MODE: 0)
VIDEO3 5.10 (EXCEPT MODE: 0)
R500 4.7k
R450 4.7k
16

SCHEMATIC DIAGRAM – PIN JACK SECTION –



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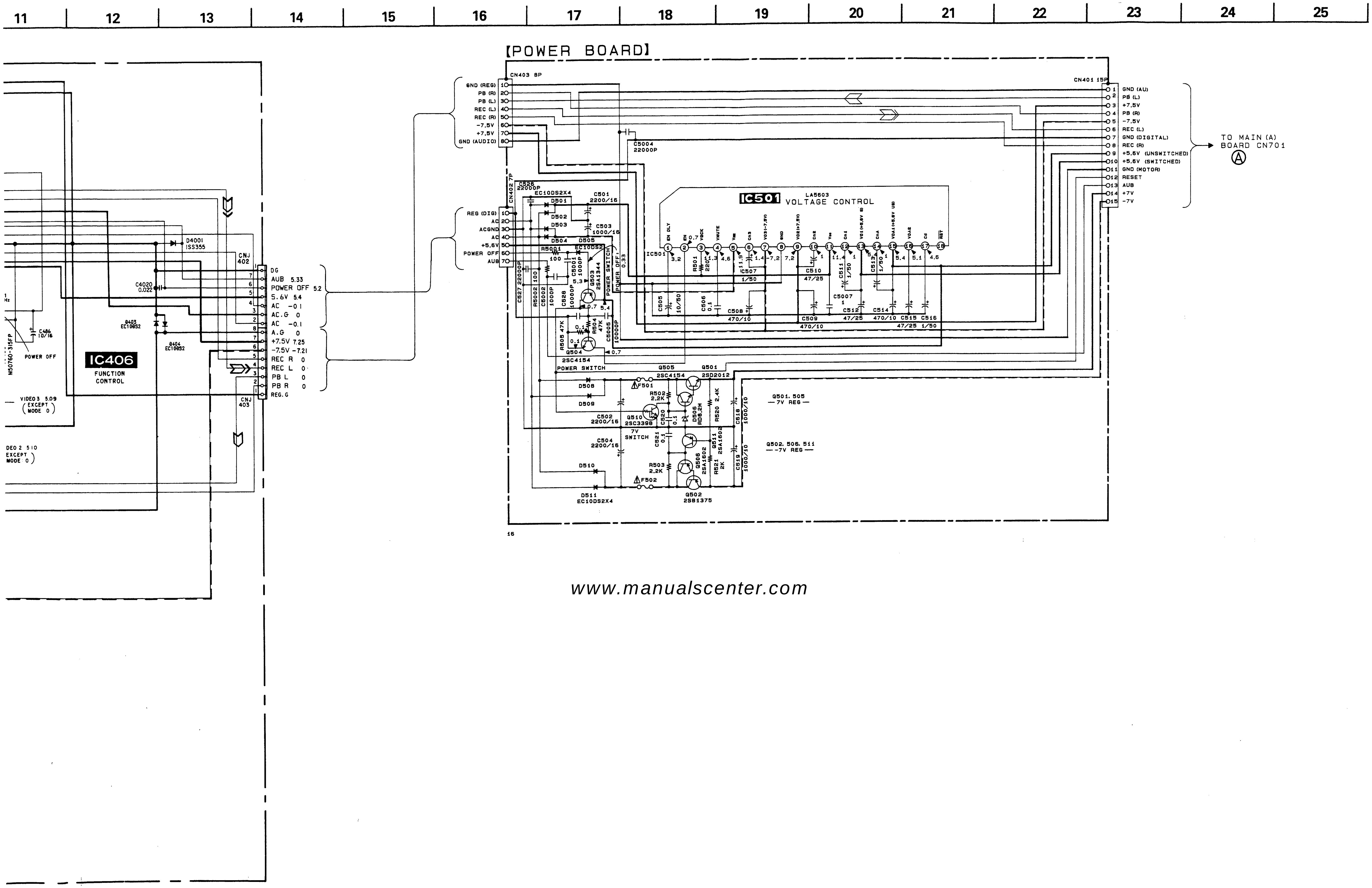
16
【PINE JACK BOARD】
【POW
SYSTEM CONTROL 2
CNJ 401
ST.L
ST.R
REG.G
R.OUT
A.G
L.OUT
L.REC
R.REC
R.CD
L.CD
CD OFF
TC FUNC
BUS
AC
AC.G
AC
D.G
IC401 (1/2) PHONO AMP
IC402 (1/2) LINE AMP
IC403 FUNCTION SELECTOR
IC404 FUNCTION SELECTOR
IC405 IN/OUT SELECTOR
IC406 FUNCTION CONTROL
IC401 (2/2) PHONO AMP
IC402 (2/2) LINE AMP
IC407 VIDEO IN/OUT SELECTOR
Q407 2SC4154 SWITCH
Q406 2SA1602 RESET
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
Q403 2SA1602
Q404 2SA1602
Q405 2SA1602
Q403,404,405 VIDEO OUTPUT SWITCH
D4001 1SS355
D4002 1SS355
D401 DCA010
D405 DCA010
D403 EC10Q52
D404 EC10Q52
IC406 M50760-315FP
IC401(1/2) M5218
IC401(2/2) M5218
IC402(1/2) 5218
IC402(2/2) 5218
IC403 4051
IC404 4051
IC405 4066
IC407 BA7625
X401 400KHz
L4001 10μH
L401 100μH
POWER OFF
VIDEO 3 5.09 (EXCEPT MODE 0)
VIDEO 2 5.10 (EXCEPT MODE 0)
VIDEO2 5.10 (EXCEPT MODE: 0)
VIDEO3 5.10 (EXCEPT MODE: 0)
JW2
JW3
JW8
JW413
JW414
JW441
JW439
JW463
JW464
AUDIO
L-CH
R-CH
IN
OUT
J402-1 VIDEO 1
J402-5 VIDEO 2
J401-3 PHONO
J402-3 VIDEO 1
J401-1 VIDEO 2
J401-2 VIDEO 2
J402-4 VIDEO 1
J401-4 PHONO
J402-6 VIDEO 2
J402-2 VIDEO 1
VIDEO
J403-2 VIDEO 1
J404-1 VIDEO 2
J403-1 MONITOR
J403-3 VIDEO 1
J404-2 VIDEO 2
CNJ 402
DG
AUB 5.33
POWER OFF 5.2
5.6V 5.4
AC -0.1
AC.G 0
AC -0.1
A.G 0
+7.5V 7.25
-7.5V -7.21
REC R 0
REC L 0
PB L 0
PB R 0
REG.G
CNJ 403
CN403
GND (REG)
PB (R)
PB (L)
REC (L)
REC (R)
-7.5V
+7.5V
GND (AUDIO)
CN402
REG (DIG)
AC
ACGND
AC
+5.6V
POWER OFF
AUB
16
16


11
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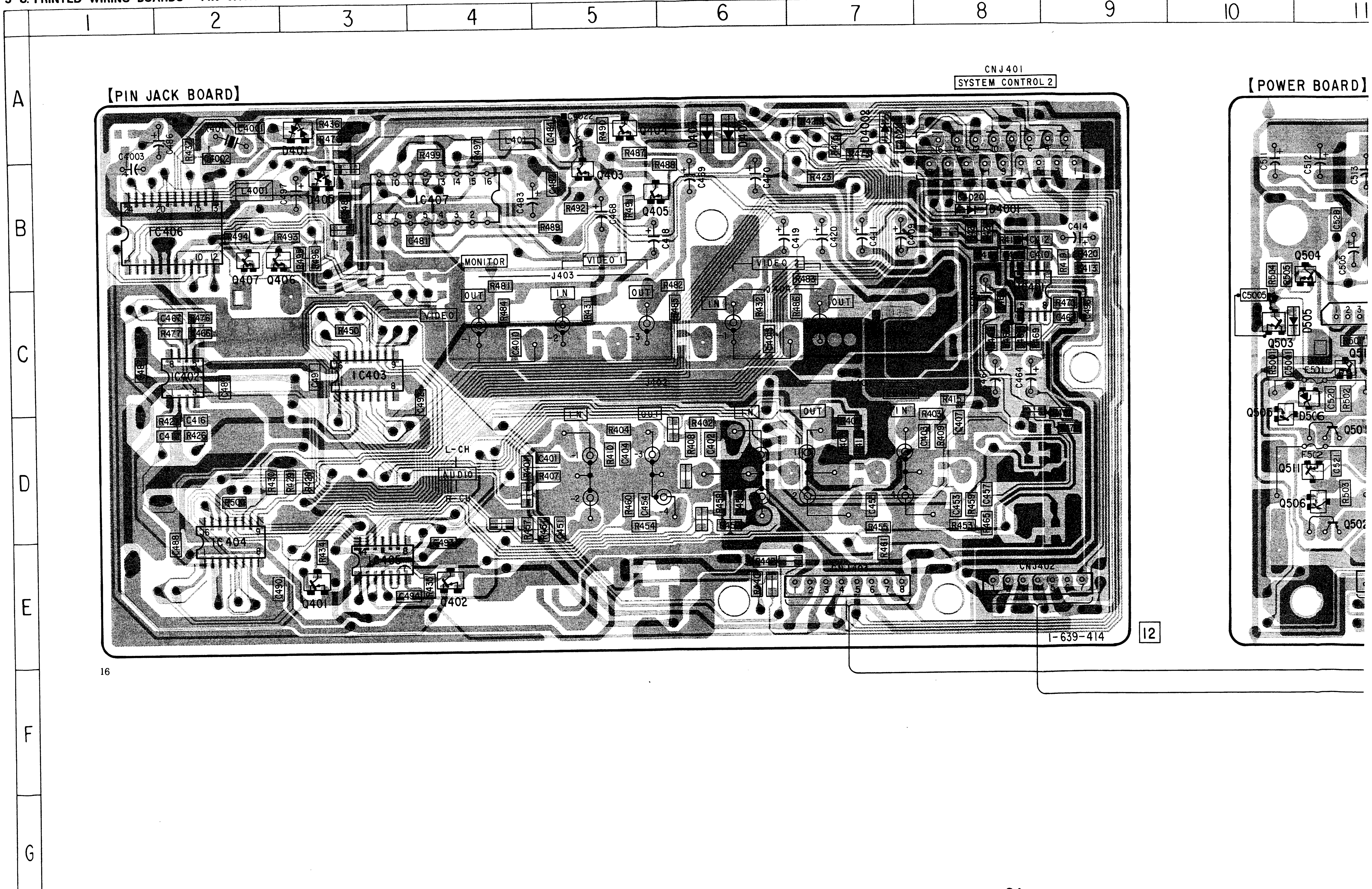
24
25
[POWER BOARD]
CN403 8P
GND (REG) 1
PB (R) 2
PB (L) 3
REC (L) 4
REC (R) 5
-7.5V 6
+7.5V 7
GND (AUDIO) 8
C5004
22000P
CN402 7P
C526
22000P
EC10DS2X4
D501
C501
2200/16
D502
D503
C503
1000/16
D504
D505
EC10DS2
REG (DIG) 1
AC 2
ACGND 3
AC 4
+5.6V 5
POWER OFF 6
AUB 7
R5001
100
C5001
1000P
Q503
2SA1344
5.3
POWER SWITCH
POWER OFF: 0.33
C527 22000P
R5002 100
C5002 1000P
C528 10000P
0.7
5.4
R505 47K
R504 47K
0.1
C5005 10000P
Q504
2SC4154
0.7
POWER SWITCH
IC501
LA5603
VOLTAGE CONTROL
EN DLY
EN
VGCK
VMUTE
Vss
Cn3
VO3(-7.5V)
GND
VO2(+7.5V)
Cn2
Vss
Cn1
VO1(+5.6V S)
CnA
VOA1(+5.6V US)
VOA2
Cd
RST
3.2
0.7
11.3
4.6
11.9
1.4
-7.2
7.2
1
11.4
1
5.4
1
5.4
5.1
4.6
R501
220
C507
1/50
C510
47/25
C511
1/50
C513
1/50
C505
10/50
C506
0.1
C508
470/10
C509
470/10
C5007
1
C512
47/25
C514
470/10
C515
C516
47/25
1/50
CN401 15P
1 GND (AU)
2 PB (L)
3 +7.5V
4 PB (R)
5 -7.5V
6 REC (L)
7 GND (DIGITAL)
8 REC (R)
9 +5.6V (UNSWITCHED)
10 +5.6V (SWITCHED)
11 GND (MOTOR)
12 RESET
13 AUB
14 +7V
15 -7V
TO MAIN (A) BOARD CN701
Ⓐ
Q505
2SC4154
Q501
2SD2012
D508
D509
F501
R502
2.2K
C502
2200/16
Q510
2SC3398
C520
0.1
D506
RD8.2M
R520 2.4K
C518
1000/10
Q501, 505
—7V REG—
7V SWITCH
C504
2200/16
C521
0.1
Q511
2SA1602
Q506
2SA1602
R521
2K
C519
1000/10
Q502, 506, 511
— -7V REG—
D510
R503
2.2K
F502
D511
EC10DS2X4
Q502
2SB1375
16
D4001
1SS355
CNJ 402
C4020
0.022
8403
EC10BS2
8404
EC10BS2
DG
7 AUB 5.33
6 POWER OFF 5.2
5 5.6V 5.4
4 AC -0.1
3 AC.G 0
2 AC -0.1
8 A.G 0
7 +7.5V 7.25
6 -7.5V -7.21
5 REC R 0
4 REC L 0
3 PB L 0
2 PB R 0
1 REG.G
CNJ 403
C486
10/16
M50760-315FP
POWER OFF
IC406
FUNCTION CONTROL
VIDEO3 5.09
(EXCEPT MODE 0)
DEO 2 510
EXCEPT MODE 0)

5-8. PRINTED WIRING BOARDS – PIN JACK SECTION –


1
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3
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9
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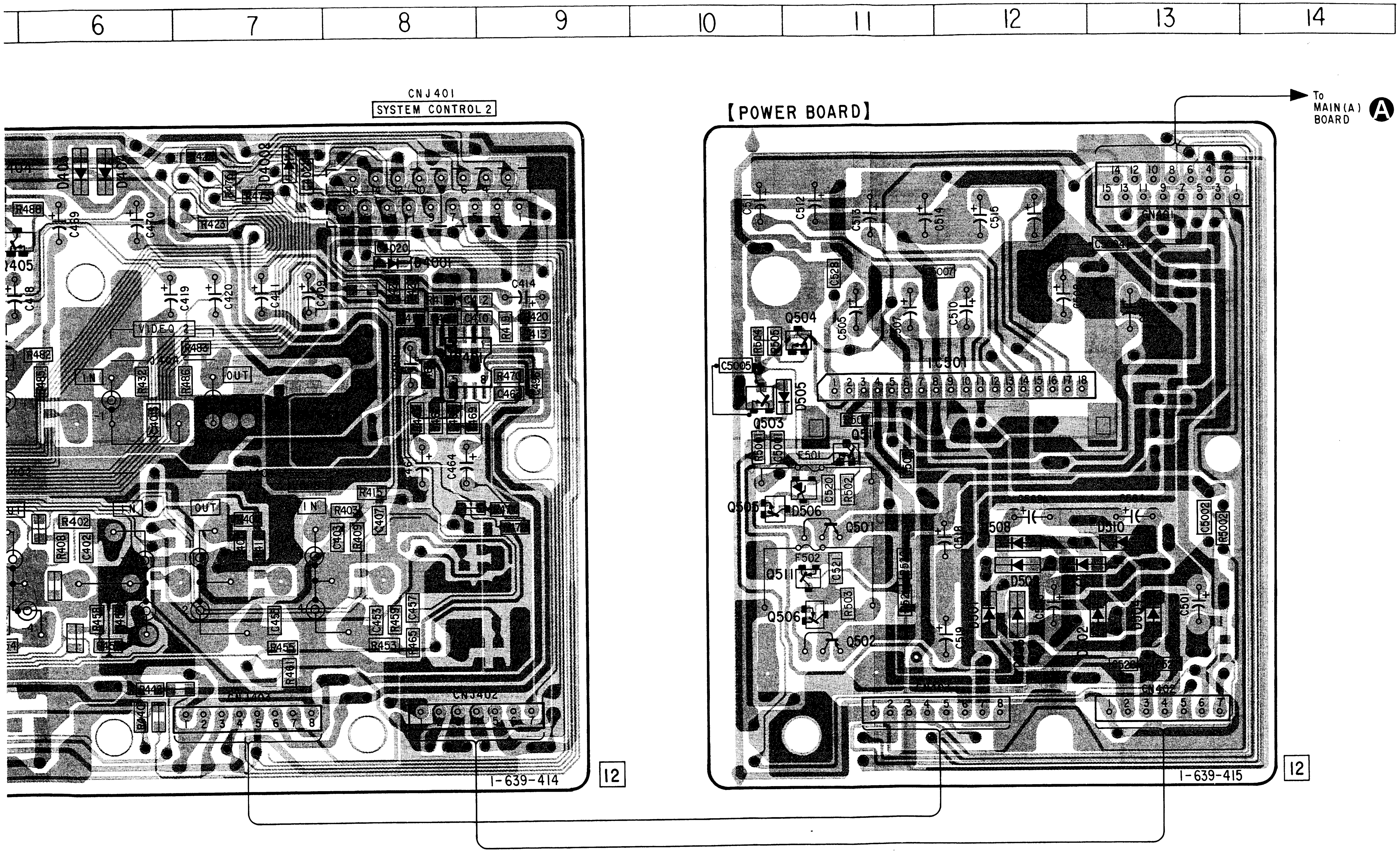
A
B
C
D
E
F
G
【PIN JACK BOARD】
【POWER BOARD】
CNJ401
SYSTEM CONTROL 2
IC406
IC407
IC402
IC403
IC404
IC405
IC401
D401
D402
D4001
D4002
Q401
Q402
Q403
Q404
Q405
Q406
Q407
Q503
Q504
Q505
Q506
Q511
D505
D506
L401
L4001
X401
MONITOR
VIDEO 1
VIDEO 2
J403
J402
VIDEO
L-CH
AUDIO
R-CH
IN
OUT
CNJ402
CNJ403
1-639-414
12
16


6
7
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11
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13
14
CNJ401
SYSTEM CONTROL 2
【POWER BOARD】
To MAIN(A) BOARD
A
VIDEO 2
IN
OUT
CNJ402
CNJ403
IC501
CN401
CN402
Q503
Q504
Q505
Q506
Q501
Q502
Q511
D505
D506
D508
D510
D501
1-639-414
12
1-639-415
12

• Semiconductor Location

Ref. No.	Location
D401	A-3
D403	A-6
D404	A-6
D405	B-3
D501	D-12
D502	D-13
D503	D-12
D504	D-13
D505	C-11
D506	C-11
D508	D-12
D509	D-12
D510	D-13
D511	D-12
D4001	B-8
D4002	A-7
IC401	C-8
IC402	C-2
IC403	C-3
IC404	E-2
IC405	E-3
IC406	B-2
IC407	B-4
IC501	C-12
Q401	E-3
Q402	E-4
Q403	B-5
Q404	A-5
Q405	B-5
Q406	B-2
Q407	B-2
Q501	D-11
Q502	D-11
Q503	C-10
Q504	B-11
Q505	D-10
Q506	D-11
Q510	C-11
Q511	D-11

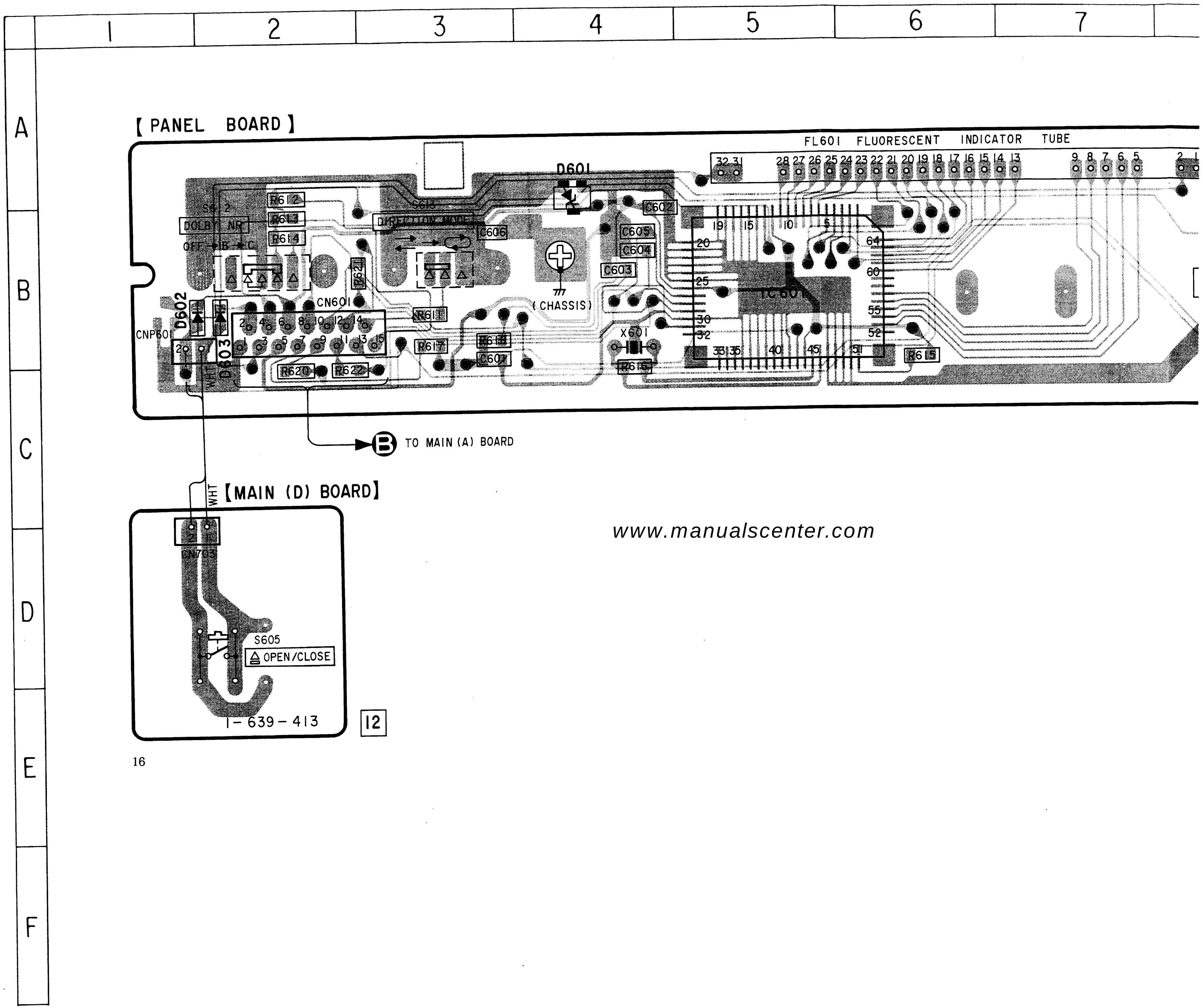
Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

5-9. PRINTED WIRING BOARDS – PANEL SECTION –

- Semiconductor Location

Ref. No.	Location
D601	A-4
D602	B-1
D603	B-2
IC601	B-5


1
2
3
4
5
6
7
A
B
C
D
E
F
【PANEL BOARD】
FL601 FLUORESCENT INDICATOR TUBE
D601
DOLBY NR
S612
OFF B C
S613
DIRECTION MODE
R612
R613
R614
R621
R611
R617
R618
R620
R622
R616
R615
C602
C605
C604
C603
C606
C601
(CHASSIS)
X601
IC601
CN601
CNP601
D602
D603
WHT
TO MAIN (A) BOARD
B
【MAIN (D) BOARD】
CN703
S605
OPEN/CLOSE
1-639-413
12
16

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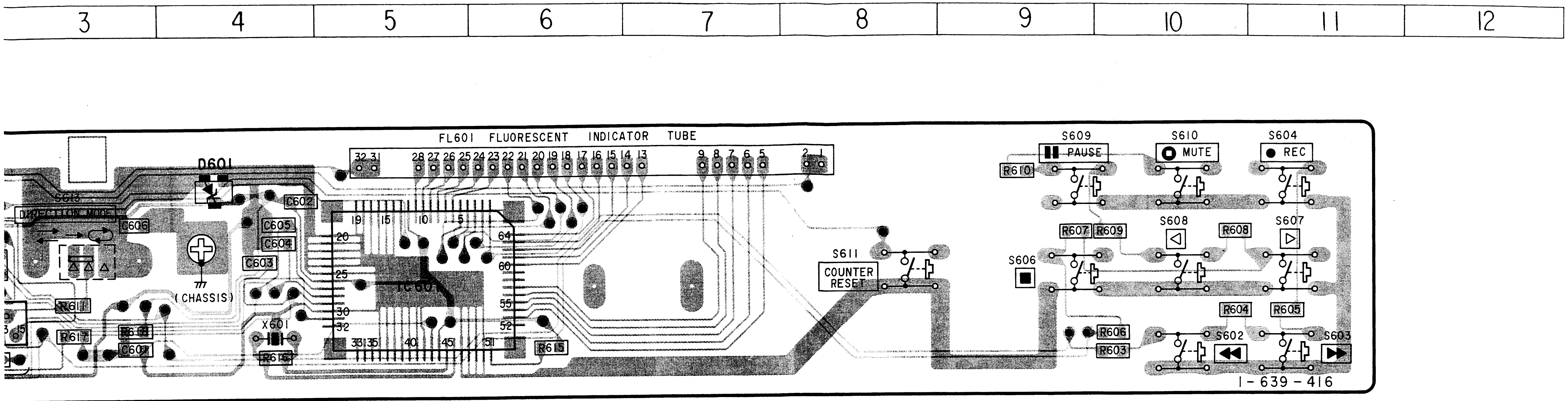
Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.


3
4
5
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7
8
9
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11
12
FL601 FLUORESCENT INDICATOR TUBE
D601
C602
C605
C604
C603
C606
(CHASSIS)
R611
R617
R608
C607
X601
R616
IC601
R615
S609
PAUSE
S610
MUTE
S604
REC
R610
R607
R609
R608
S608
S607
S606
S611
COUNTER RESET
R604
R605
R606
R603
S602
S603
1-639-416

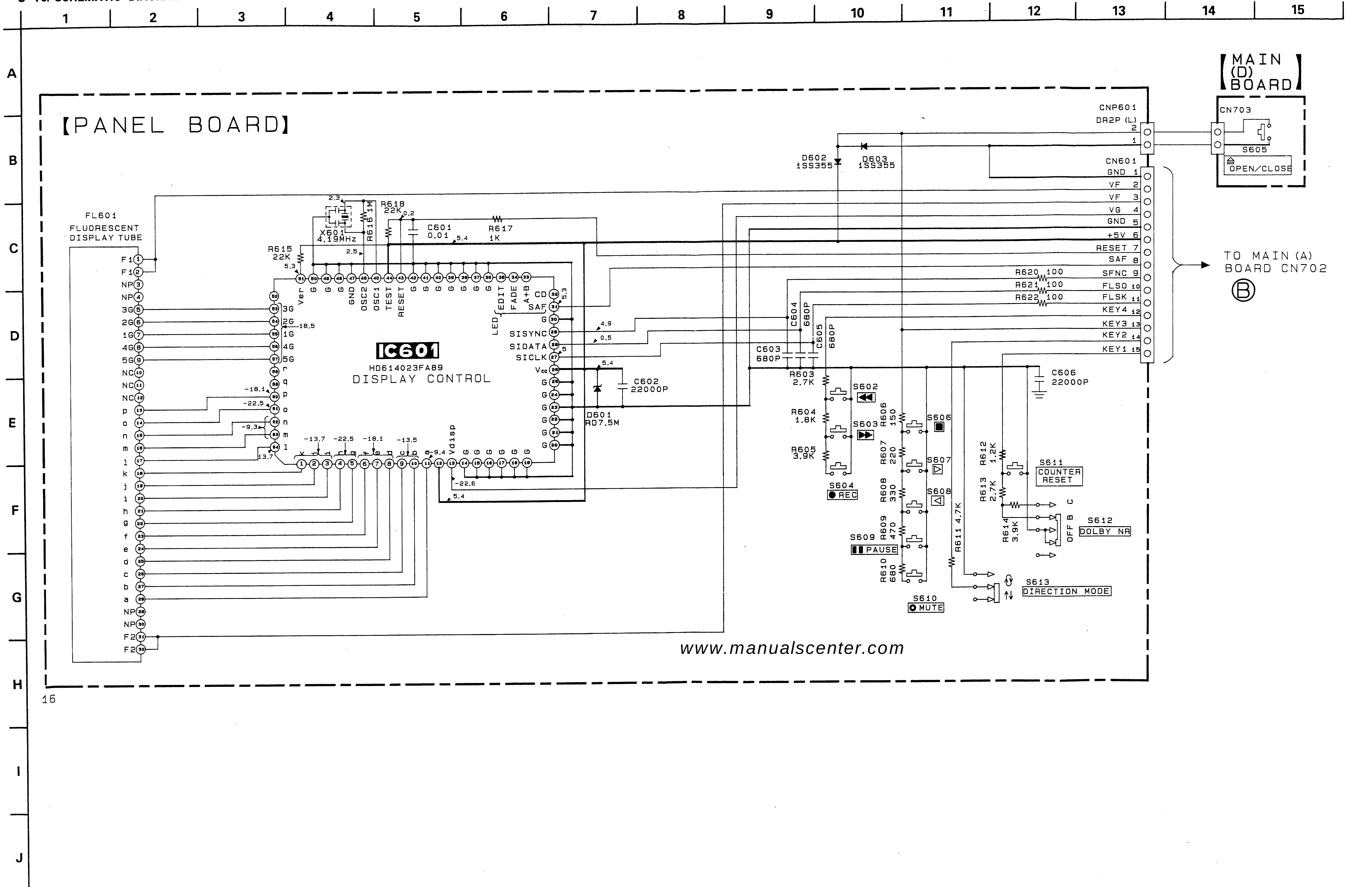
12

B TO MAIN (A) BOARD

D]

12

5-10. SCHEMATIC DIAGRAM – PANEL SECTION – • See page 28 for Note on Schematic Diagram.



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D
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H
I
J
【PANEL BOARD】
【MAIN (D) BOARD】
CN703
S605
OPEN/CLOSE
CNP601
DR2P (L)
CN601
GND 1
VF 2
VF 3
VG 4
GND 5
+5V 6
RESET 7
SAF 8
SFNC 9
FLSO 10
FLSK 11
KEY4 12
KEY3 13
KEY2 14
KEY1 15
TO MAIN (A) BOARD CN702
Ⓑ
D602 1SS355
D603 1SS355
FL601 FLUORESCENT DISPLAY TUBE
X601 4.19MHz
R616 1M
R618 22K
C601 0.01
R617 1K
R615 22K
IC601
HD614023FA89
DISPLAY CONTROL
Ver
GND
OSC2
OSC1
TEST
RESET
EDIT
FADE
A+B
LED
CD
SAF
SISYNC
SIDATA
SICLK
Vcc
Vdisp
C602 22000P
D601 RD7.5M
R620 100
R621 100
R622 100
C603 680P
C604 680P
C605 680P
C606 22000P
R603 2.7K
R604 1.8K
R605 3.9K
R606 150
R607 220
R608 330
R609 470
R610 680
R611 4.7K
R612 1.2K
R613 2.7K
R614 3.9K
S602
S603
S604 REC
S606
S607
S608
S609 PAUSE
S610 MUTE
S611 COUNTER RESET
S612 DOLBY NR
OFF B C
S613 DIRECTION MODE
16

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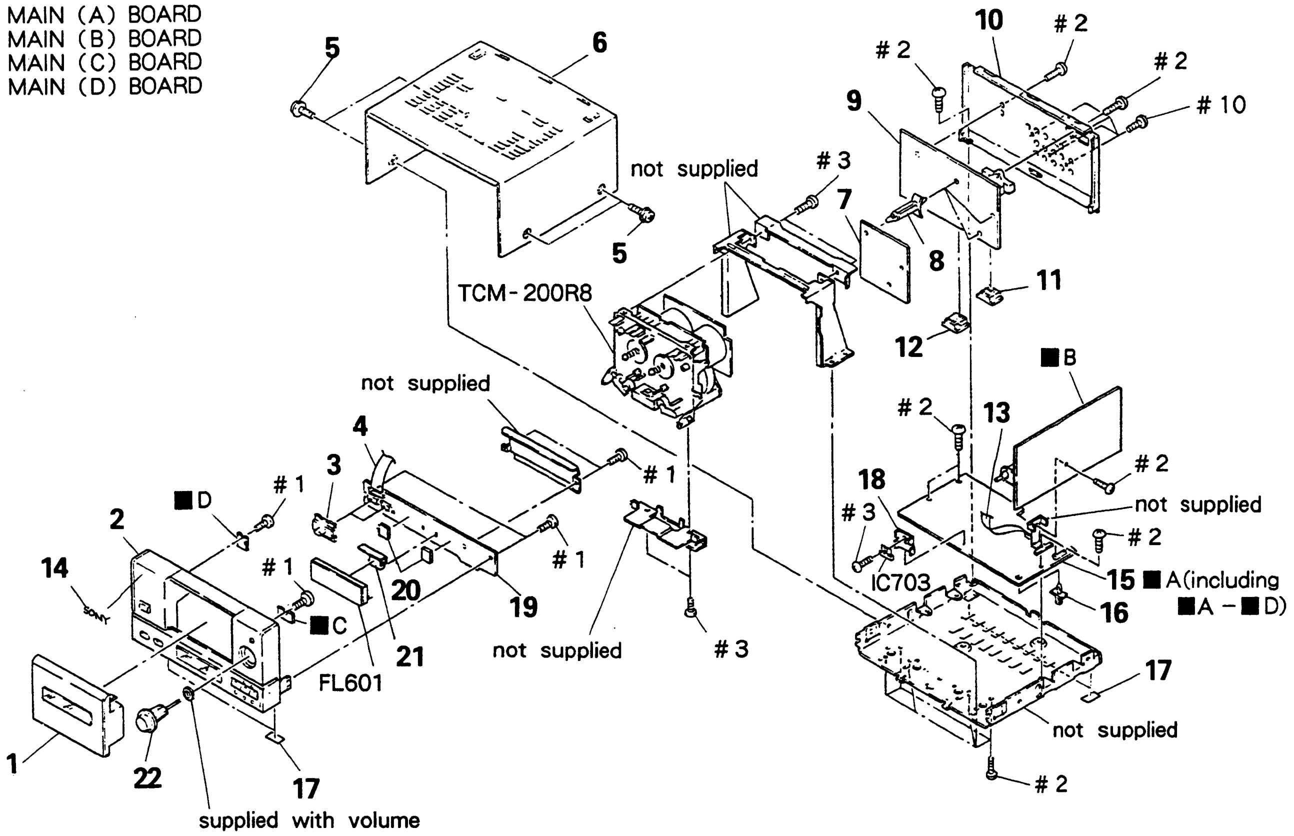
SECTION 6
EXPLODED VIEWS

NOTE :

- – XX, – X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

6-1. FRONT PANEL SECTION

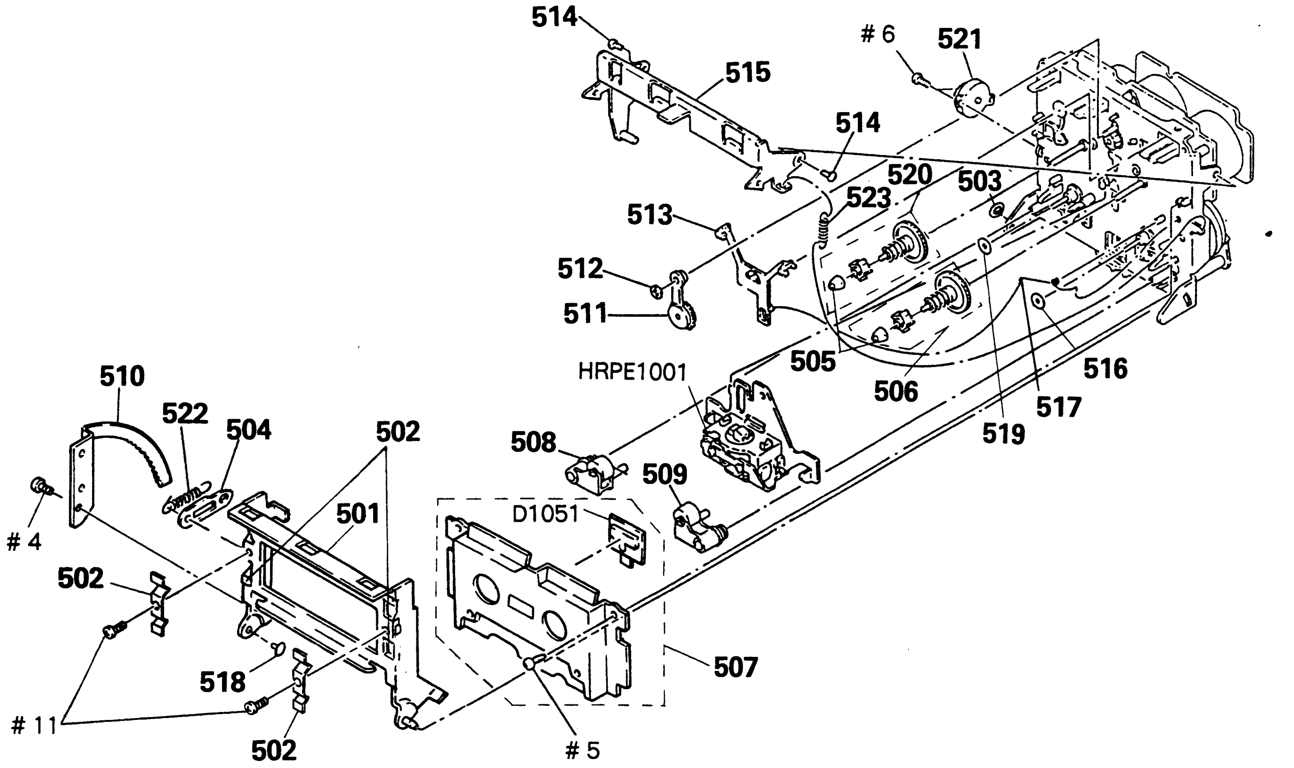
■A : MAIN (A) BOARD
■B : MAIN (B) BOARD
■C : MAIN (C) BOARD
■D : MAIN (D) BOARD



5
6
10
# 2
# 2
# 2
# 10
9
not supplied
# 3
7
8
5
TCM-200R8
11
12
not supplied
■B
4
# 2
13
# 1
3
# 2
■D
# 1
18
not supplied
2
# 3
# 2
# 1
14
IC703
15 ■A (including
■A – ■D)
20
16
■C
19
21
not supplied
# 3
FL601
17
not supplied
1
22
17
# 2
supplied with volume

Ref. No.	Part No.	Description	Remarks
1	A-2003-769-A	LID ASSY, CASSETTE	
2	A-2003-768-A	PANEL ASSY, FRONT	
3	3-368-105-01	KNOB (SLIDE)	
4	1-575-906-11	WIRE, FLAT TYPE (15 CORE)	
5	3-363-099-01	SCREW (CASE +3X8 TP2)	
6	4-932-841-01	CASE	
7	* 1-639-415-11	POWER BOARD	
8	* 3-703-353-02	SUPPORT, PC BOARD	
9	* A-2006-548-A	PIN JACK BOARD, COMPLETE	
10	* 3-367-074-01	PANEL, BACK	
11	* 1-573-188-11	CONNECTOR, BRIDGE 7P	
12	* 1-573-389-11	COONECTOR, BRIDGE 8P	
13	1-575-664-11	WIRE, FLAT TYPE (15 CORE)	
14	4-942-636-01	EMBLEM (NO. 3. 5), SONY	
15	* A-2006-452-A	MAIN BOARD, COMPLETE	
16	* 3-350-847-31	HOLDER, PCB	
17	4-930-336-01	FOOT (FELT)	
18	* 3-356-925-01	HEAT SINK	
19	* A-2006-453-A	PANEL BOARD, COMPLETE	
20	* 4-921-941-01	CUSHION (FL)	
21	* 3-368-109-01	HOLDER, FL TUBE	
22	A-2003-767-A	KNOB (REC VOL) ASSY	
FL601	1-519-656-11	INDICATOR TUBE, FLUORESCENT	
IC703	8-759-973-95	IC BA6219B	

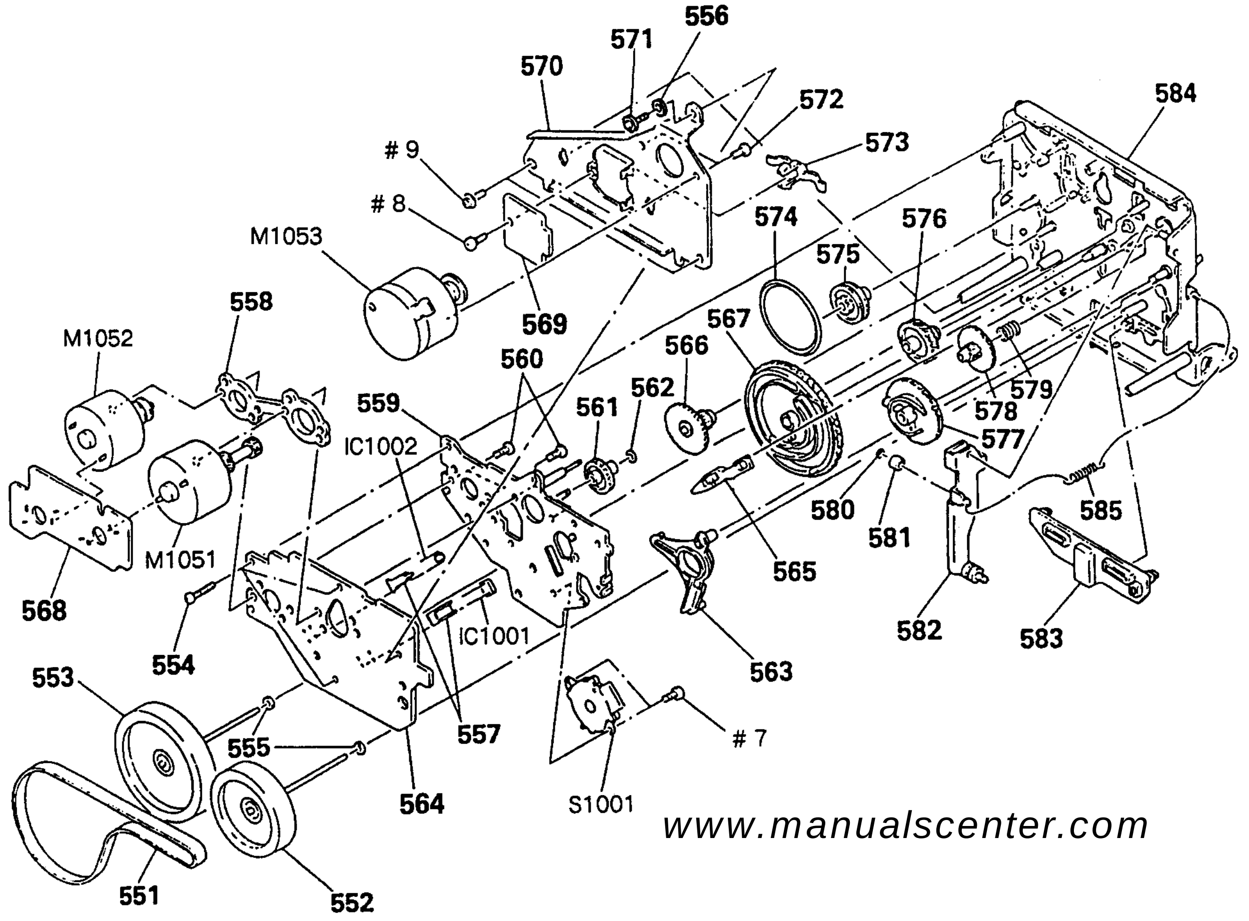
6-2. MECHANISM SECTION-1
(TCM-200R8)



514
515
# 6
521
514
520
503
523
513
512
511
HRPE1001
505
506
516
517
519
510
522
504
502
501
508
509
D1051
# 4
502
507
518
# 11
502
# 5

Ref. No.	Part No.	Description	Remarks
501	X-3362-956-1	HOLDER ASSY, CASSETTE	
502	3-354-908-01	SPRING (CASSETTE RETAINER)	
503	3-558-708-21	WASHER, STOPPER	
504	* 3-356-717-01	LEVER (JOINT)	
505	3-362-308-01	CAP (REEL)	
506	X-3356-627-1	GEAR (T) ASSY	
507	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
508	X-3343-455-1	LEVER (PINCH F) ASSY	
509	X-3343-456-1	LEVER (PINCH R) ASSY	
510	X-3362-957-1	GEAR ASSY, LOADING	
511	X-3356-641-1	LEVER (FR2) ASSY	
512	3-669-465-11	WASHER (1.5), STOPPER	
513	3-356-614-01	SLIDER (BRAKE)	
514	3-356-601-11	SCREW, STEP	
515	* X-3356-608-1	LEVER (LIFTER) ASSY	
516	3-356-713-01	WASHER	
517	3-356-619-01	SPRING (B), TORSION	
518	3-356-710-01	SHAFT (LEFT) (CASSETTE HOLDER)	
519	3-356-714-01	WASHER	
520	X-3356-628-1	GEAR (S) ASSY	
521	3-712-786-01	DAMPER, OIL	
522	3-356-626-01	SPRING, TENSION	
523	3-356-625-01	SPRING, TENSION	
D1051	8-719-980-85	DIODE SLF-325C	
HRPE1001	A-2003-772-A	BASE ASSY, HEAD	

6-3. MECHANISM SECTION-2 (TCM-200R8)


556
571
570
572
584
#9
573
#8
574
576
M1053
575
558
569
567
M1052
566
560
562
579
559
561
578
IC1002
577
580
585
581
M1051
565
568
554
IC1001
582
583
563
553
557
555
#7
564
S1001
551
552

Ref. No.	Part No.	Description	Remarks
551	3-356-730-01	BELT (CAPSTAN R2)	
552	X-3356-642-1	FLYWHEEL (R FWD) ASSY	
553	X-3356-643-1	FLYWHEEL (R REV) ASSY	
554	3-355-801-01	SCREW (BTP 2X18)	
555	3-356-705-01	WASHER (CAPSTAN)	
556	* 3-356-718-01	SPACER (THRUST RETAINER R)	
557	3-356-631-01	HOLDER (SENSOR)	
558	* 3-356-628-01	SPACER (MOTOR)	
559	* X-3356-602-4	BRACKET (MOTOR R) ASSY	
560	3-363-804-01	SCREW (+P 2.6X6.5)	
561	3-356-702-01	GEAR (COMMUNICATION B)	
562	3-669-465-00	WASHER (1.5), STOPPER	
563	3-356-613-01	LEVER (MODE)	
564	* 1-632-740-11	MD BOARD	
565	3-356-617-01	LEVER (SELECTION)	
566	3-356-606-01	GEAR (MODE)	
567	3-356-615-01	GEAR (MODE CAM RR)	
568	* 1-632-741-11	REEL MOTOR BOARD	
569	* 1-634-323-11	TRANSLATION BOARD	
570	* 3-356-629-01	BRACKET (THRUST RETAINER R)	

Ref. No.	Part No.	Description	Remarks
571	3-356-707-01	SCREW (+PTPWH 2X25)	
572	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
573	3-575-321-00	RETAINER, THRUST, CAPSTAN	
574	3-356-603-01	BELT (MODE)	
575	3-356-607-01	PULLEY (MODE)	
576	3-356-703-01	GEAR (COMMUNICATION C)	
577	3-356-616-01	GEAR (LOADING CAM)	
578	3-356-609-01	GEAR (LOADING)	
579	3-356-605-01	SPRING, COMPRESSION	
580	3-558-708-11	WASHER, STOPPER	
581	3-356-630-01	ROLLER (LOADING)	
582	* X-3356-606-1	LEVER (LOADING) ASSY	
583	3-356-612-01	SLIDER (REVERSE)	
584	X-3356-634-1	CHASSIS (R2)COMPLETE ASSY,MECH	
585	3-356-624-01	SPRING, TENSION	
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY	
S1001	1-466-525-11	ENCODER, ROTARY	

MAIN

SECTION 7
ELECTRICAL PARTS LIST

NOTE :

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be defferent from the parts specified in the diagrams or the components used on the set.
- −XX, −X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... ,
  uPB... , μPB... , uPC... , μPC... ,
  uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	* A-2006-452-A	MAIN BOARD, COMPLETE ********************				
	* 1-573-496-11	HOUSING, CONNECTOR 12P				
	* 1-573-497-11	PIN, CONNECTOR (PC BOARD) 12P				
	* 3-356-925-01	HEAT SINK				
	7-682-547-04	SCREW +BVTT 3X6 (S)				
		〈 CAPACITOR 〉				
C101	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C102	1-136-157-00	FILM	0.022uF	5%	50V	
C103	1-124-282-00	ELECT	22uF	20%	25V	
C105	1-136-158-00	FILM	0.027uF	5%	50V	
C106	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C107	1-124-907-11	ELECT	10uF	20%	50V	
C108	1-126-233-11	ELECT	22uF	20%	50V	
C109	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C110	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C111	1-136-174-00	FILM	0.56uF	5%	50V	
C112	1-136-171-00	FILM	0.33uF	5%	50V	
C113	1-124-907-11	ELECT	10uF	20%	50V	
C114	1-124-902-00	ELECT	0.47uF	20%	50V	
C115	1-124-927-11	ELECT	4.7uF	20%	100V	
C116	1-124-927-11	ELECT	4.7uF	20%	100V	
C117	1-124-925-11	ELECT	2.2uF	20%	100V	
C118	1-162-285-31	CERAMIC	180PF	10%	50V	
C119	1-136-935-11	FILM	22PF	5%	630V	
C120	1-130-468-00	MYLAR	560PF	5%	50V	
C121	1-136-433-11	FILM	100PF	5%	630V	
C122	1-136-272-00	FILM	68PF	5%	630V	
C123	1-136-153-00	FILM	0.01uF	5%	50V	
C124	1-136-165-00	FILM	0.1uF	5%	50V	
C125	1-136-157-00	FILM	0.022uF	5%	50V	
C201	1-162-294-31	CERAMIC	0.001uF	10%	50V	

Ref. No.	Part No.	Description				Remarks
C202	1-136-157-00	FILM	0.022uF	5%	50V	
C203	1-124-282-00	ELECT	22uF	20%	25V	
C205	1-136-158-00	FILM	0.027uF	5%	50V	
C206	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C207	1-124-907-11	ELECT	10uF	20%	50V	
C208	1-126-233-11	ELECT	22uF	20%	50V	
C209	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C210	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C211	1-136-174-00	FILM	0.56uF	5%	50V	
C212	1-136-171-00	FILM	0.33uF	5%	50V	
C213	1-124-907-11	ELECT	10uF	20%	50V	
C214	1-124-902-00	ELECT	0.47uF	20%	50V	
C215	1-124-927-11	ELECT	4.7uF	20%	100V	
C216	1-124-927-11	ELECT	4.7uF	20%	100V	
C217	1-124-925-11	ELECT	2.2uF	20%	100V	
C218	1-162-285-31	CERAMIC	180PF	10%	50V	
C219	1-136-935-11	FILM	22PF	5%	630V	
C220	1-130-468-00	MYLAR	560PF	5%	50V	
C221	1-136-433-11	FILM	100PF	5%	630V	
C222	1-136-272-00	FILM	68PF	5%	630V	
C223	1-136-153-00	FILM	0.01uF	5%	50V	
C224	1-136-165-00	FILM	0.1uF	5%	50V	
C225	1-136-157-00	FILM	0.022uF	5%	50V	
C301	1-124-443-00	ELECT	100uF	20%	10V	
C302	1-124-443-00	ELECT	100uF	20%	10V	
C303	1-124-907-11	ELECT	10uF	20%	50V	
C304	1-124-907-11	ELECT	10uF	20%	50V	
C305	1-124-478-11	ELECT	100uF	20%	25V	
C306	1-124-925-11	ELECT	2.2uF	20%	100V	
C307	1-124-902-00	ELECT	0.47uF	20%	50V	
C308	1-162-215-31	CERAMIC	47PF	5%	50V	
C309	1-161-494-00	CERAMIC	0.022uF		25V	
C310	1-162-286-31	CERAMIC	220PF	10%	50V	
C311	1-124-925-11	ELECT	2.2uF	20%	100V	
C312	1-124-477-11	ELECT	47uF	20%	25V	

Ref. No.	Part No.	Description				Remarks
C313	1-124-902-00	ELECT	0.47uF	20%	50V	
C314	1-124-478-11	ELECT	100uF	20%	25V	
C315	1-124-478-11	ELECT	100uF	20%	25V	
C316	1-130-856-00	FILM	0.0068uF	5%	100V	
C317	1-136-230-00	FILM	0.0022uF	5%	100V	
C318	1-136-230-00	FILM	0.0022uF	5%	100V	
C319	1-124-907-11	ELECT	10uF	20%	50V	
C320	1-161-494-00	CERAMIC	0.022uF	5%	25V	
C321	1-136-558-11	FILM	0.0039uF	5%	630V	
C322	1-107-046-00	MICA	4.7PF		500V	
C701	1-124-443-00	ELECT	100uF	20%	10V	
C702	1-164-159-11	CERAMIC	0.1uF		50V	
C703	1-164-159-11	CERAMIC	0.1uF		50V	
C704	1-164-159-11	CERAMIC	0.1uF		50V	
C705	1-124-443-00	ELECT	100uF	20%	10V	
C706	1-124-925-11	ELECT	2.2uF	20%	100V	
C707	1-164-159-11	CERAMIC	0.1uF		50V	
C708	1-136-165-00	FILM	0.1uF	5%	50V	
C709	1-136-165-00	FILM	0.1uF	5%	50V	
C720	1-164-159-11	CERAMIC	0.1uF		50V	
C750	1-161-494-00	CERAMIC	0.022uF		25V	
C751	1-161-494-00	CERAMIC	0.022uF		25V	
C752	1-161-494-00	CERAMIC	0.022uF		25V	
C753	1-161-494-00	CERAMIC	0.022uF		25V	
C754	1-161-494-00	CERAMIC	0.022uF		25V	
C801	1-124-907-11	ELECT	10uF	20%	50V	
C802	1-136-594-11	FILM	0.018uF	5%	100V	
C803	1-124-907-11	ELECT	10uF	20%	50V	

(CONNECTOR)

Ref. No.	Part No.	Description	Remarks
CN701	* 1-568-834-11	SOCKET, CONNECTOR 15P	
CN702	* 1-568-834-11	SOCKET, CONNECTOR 15P	
CNP301	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP302	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP303	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
CNP304	* 1-564-511-11	PLUG, CONNECTOR 8P	
CNP305	* 1-564-518-11	PLUG, CONNECTOR 3P	
CNP702	* 1-564-339-00	PIN, CONNECTOR 5P	
CNP703	* 1-564-505-11	PLUG, CONNECTOR 2P	

(COMPOSITION CIRCUIT BLOCK)

Ref. No.	Part No.	Description	Remarks
CP701	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
CP702	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
CP703	1-232-944-11	COMPOSITION CIRCUIT BLOCK	

(DIODE)

Ref. No.	Part No.	Description		Remarks
D101	8-719-912-20	DIODE	1SS120	
D201	8-719-912-20	DIODE	1SS120	
D301	8-719-912-20	DIODE	1SS120	
D302	8-719-912-20	DIODE	1SS120	
D303	8-719-912-20	DIODE	1SS120	
D304	8-719-933-50	DIODE	HZS7C2L	
D305	8-719-912-20	DIODE	1SS120	
D306	8-719-912-20	DIODE	1SS120	
D307	8-719-912-20	DIODE	1SS120	
D308	8-719-912-20	DIODE	1SS120	
D309	8-719-912-20	DIODE	1SS120	
D601	8-719-301-38	DIODE	SEL2210S-C(AUTO REC LEVEL)	
D701	8-719-912-20	DIODE	1SS120	
D702	8-719-912-20	DIODE	1SS120	
D703	8-719-933-50	DIODE	HZS7C2L	
D704	8-719-933-50	DIODE	HZS7C2L	
D705	8-719-933-50	DIODE	HZS7C2L	
D706	8-719-933-50	DIODE	HZS7C2L	
D707	8-719-933-50	DIODE	HZS7C2L	
D708	8-719-933-50	DIODE	HZS7C2L	
D709	8-719-933-50	DIODE	HZS7C2L	
D710	8-719-933-50	DIODE	HZS7C2L	
D711	8-719-933-50	DIODE	HZS7C2L	
D712	8-719-933-50	DIODE	HZS7C2L	
D713	8-719-912-20	DIODE	1SS120	
D714	8-719-912-20	DIODE	1SS120	
D720	8-719-200-77	DIODE	10E2N	
D721	8-719-200-77	DIODE	10E2N	
D722	8-719-200-77	DIODE	10E2N	
D750	8-719-933-47	DIODE	HZS7B2L	
D751	8-719-933-47	DIODE	HZS7B2L	
D752	8-719-912-20	DIODE	1SS120	
D753	8-719-912-20	DIODE	1SS120	
D801	8-719-109-89	DIODE	RD5.6ESB2	
D802	8-719-200-77	DIODE	10E2N	
D803	8-719-200-77	DIODE	10E2N	
D804	8-719-200-77	DIODE	10E2N	
D805	8-719-200-77	DIODE	10E2N	

MAIN

Ref. No.	Part No.	Description	Remarks
		< IC >	
IC301	8-759-111-44	IC uPC4570C-1	
IC302	8-752-036-34	IC CXA1330S	
IC303	8-752-038-02	IC CXA1198AP	
IC304	8-759-945-58	IC RC4558P	
IC305	8-759-945-58	IC RC4558P	
IC306	8-759-106-56	IC uPC1297CA	
IC701	8-759-633-86	IC M50747-B83SP	
IC702	8-759-634-79	IC M50944-155SP	
IC703	8-759-973-95	IC BA6219B	
IC704	8-759-822-09	IC LB1641	
IC705	8-759-240-69	IC TC4069UBP	
IC706	8-759-822-09	IC LB1641	
		< COIL >	
L101	1-410-780-11	INDUCTOR 27mH	
L201	1-410-780-11	INDUCTOR 27mH	
L301	1-408-080-00	INDUCTOR 100uH	
L801	1-410-761-11	INDUCTOR 0.68mH	
L802	1-408-575-11	INDUCTOR 100uH	
L803	1-408-575-11	INDUCTOR 100uH	
		< FILTER >	
LPF101	1-236-087-11	FILTER, LOW PASS	
LPF201	1-236-087-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q101	8-729-900-89	TRANSISTOR DTC144ES	
Q102	8-729-900-74	TRANSISTOR DTC143TS	
Q103	8-729-821-31	TRANSISTOR 2SD1012-FG	
Q201	8-729-900-89	TRANSISTOR DTC144ES	
Q202	8-729-900-74	TRANSISTOR DTC143TS	
Q203	8-729-821-31	TRANSISTOR 2SD1012-FG	
Q301	8-729-900-65	TRANSISTOR DTA144ES	
Q302	8-729-900-89	TRANSISTOR DTC144ES	
Q303	8-729-900-89	TRANSISTOR DTC144ES	
Q304	8-729-820-24	TRANSISTOR 2SC3330-T	
Q305	8-729-900-89	TRANSISTOR DTC144ES	
Q306	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q307	8-729-900-65	TRANSISTOR DTA144ES	
Q308	8-729-900-65	TRANSISTOR DTA144ES	
Q309	8-729-900-89	TRANSISTOR DTC144ES	
Q310	8-729-900-65	TRANSISTOR DTA144ES	
Q311	8-729-900-61	TRANSISTOR DTA114ES	
Q312	8-729-900-80	TRANSISTOR DTC114ES	
Q313	8-729-900-80	TRANSISTOR DTC114ES	
Q314	8-729-900-80	TRANSISTOR DTC114ES	
Q315	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q316	8-729-194-57	TRANSISTOR 2SC945-P	
Q317	8-729-194-57	TRANSISTOR 2SC945-P	
Q318	8-729-900-65	TRANSISTOR DTA144ES	
Q701	8-729-900-80	TRANSISTOR DTC114ES	
Q702	8-729-900-80	TRANSISTOR DTC114ES	
Q703	8-729-900-80	TRANSISTOR DTC114ES	
Q704	8-729-820-24	TRANSISTOR 2SC3330-T	
Q705	8-729-820-24	TRANSISTOR 2SC3330-T	
Q706	8-729-900-89	TRANSISTOR DTC144ES	
Q707	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q708	8-729-900-61	TRANSISTOR DTA114ES	
Q709	8-729-900-61	TRANSISTOR DTA114ES	
Q712	8-729-900-65	TRANSISTOR DTA144ES	
Q713	8-729-900-65	TRANSISTOR DTA144ES	
Q715	8-729-900-80	TRANSISTOR DTC114ES	
Q801	8-729-140-96	TRANSISTOR 2SD774-34	
Q802	8-729-140-96	TRANSISTOR 2SD774-34	
		< RESISTOR >	
R101	1-249-435-11	CARBON 33K 5% 1/4W	
R102	1-249-403-11	CARBON 68 5% 1/4W	
R103	1-247-882-11	CARBON 130K 5% 1/4W	
R104	1-249-426-11	CARBON 5.6K 5% 1/4W	
R105	1-249-420-11	CARBON 1.8K 5% 1/4W	
R107	1-247-887-00	CARBON 220K 5% 1/4W	
R108	1-247-840-00	CARBON 2.4K 5% 1/4W	
R110	1-249-423-11	CARBON 3.3K 5% 1/4W	
R111	1-249-428-11	CARBON 8.2K 5% 1/4W	
R112	1-247-864-11	CARBON 24K 5% 1/4W	
R113	1-249-414-11	CARBON 560 5% 1/4W	
R114	1-249-417-11	CARBON 1K 5% 1/4W	
R115	1-247-846-11	CARBON 4.3K 5% 1/4W	
R116	1-249-423-11	CARBON 3.3K 5% 1/4W	
R117	1-249-417-11	CARBON 1K 5% 1/4W	

MAIN

Ref. No.	Part No.	Description				Remarks
R118	1-249-429-11	CARBON	10K	5%	1/4W	
R119	1-249-425-11	CARBON	4.7K	5%	1/4W	
R120	1-249-421-11	CARBON	2.2K	5%	1/4W	
R121	1-249-429-11	CARBON	10K	5%	1/4W	
R122	1-249-425-11	CARBON	4.7K	5%	1/4W	
R124	1-249-429-11	CARBON	10K	5%	1/4W	
R125	1-249-437-11	CARBON	47K	5%	1/4W	
R126	1-249-431-11	CARBON	15K	5%	1/4W	
R127	1-249-409-11	CARBON	220	5%	1/4W	
R128	1-249-428-11	CARBON	8.2K	5%	1/4W	
R129	1-247-883-00	CARBON	150K	5%	1/4W	
R130	1-249-393-11	CARBON	10	5%	1/4W	
R131	1-249-432-11	CARBON	18K	5%	1/4W	
R132	1-249-439-11	CARBON	10K	5%	1/4W	
R201	1-249-435-11	CARBON	33K	5%	1/4W	
R202	1-249-403-11	CARBON	68	5%	1/4W	
R203	1-247-882-11	CARBON	130K	5%	1/4W	
R204	1-249-426-11	CARBON	5.6K	5%	1/4W	
R205	1-249-420-11	CARBON	1.8K	5%	1/4W	
R207	1-247-887-00	CARBON	220K	5%	1/4W	
R208	1-247-840-00	CARBON	2.4K	5%	1/4W	
R210	1-249-423-11	CARBON	3.3K	5%	1/4W	
R211	1-249-428-11	CARBON	8.2K	5%	1/4W	
R212	1-247-864-11	CARBON	24K	5%	1/4W	
R213	1-249-414-11	CARBON	560	5%	1/4W	
R215	1-247-846-11	CARBON	4.3K	5%	1/4W	
R216	1-249-423-11	CARBON	3.3K	5%	1/4W	
R217	1-249-417-11	CARBON	1K	5%	1/4W	
R218	1-249-429-11	CARBON	10K	5%	1/4W	
R219	1-249-425-11	CARBON	4.7K	5%	1/4W	
R220	1-249-421-11	CARBON	2.2K	5%	1/4W	
R221	1-249-429-11	CARBON	10K	5%	1/4W	
R222	1-249-425-11	CARBON	4.7K	5%	1/4W	
R224	1-249-429-11	CARBON	10K	5%	1/4W	
R225	1-249-437-11	CARBON	47K	5%	1/4W	
R226	1-249-431-11	CARBON	15K	5%	1/4W	
R227	1-249-409-11	CARBON	220	5%	1/4W	
R228	1-249-428-11	CARBON	8.2K	5%	1/4W	
R229	1-247-883-00	CARBON	150K	5%	1/4W	
R230	1-249-393-11	CARBON	10	5%	1/4W	
R231	1-247-432-11	CARBON	18K	5%	1/4W	
R232	1-249-439-11	CARBON	10K	5%	1/4W	
R301	1-249-409-11	CARBON	220	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-249-435-11	CARBON	33K	5%	1/4W	
R305	1-249-436-11	CARBON	39K	5%	1/4W	
R306	1-247-880-11	CARBON	110K	5%	1/4W	
R307	1-247-885-00	CARBON	180K	5%	1/4W	
R308	1-249-436-11	CARBON	39K	5%	1/4W	
R309	1-247-881-00	CARBON	120K	5%	1/4W	
R310	1-247-874-11	CARBON	62K	5%	1/4W	
R311	1-247-872-11	CARBON	51K	5%	1/4W	
R312	1-247-889-00	CARBON	270K	5%	1/4W	
R313	1-247-883-00	CARBON	150K	5%	1/4W	
R314	1-247-870-11	CARBON	43K	5%	1/4W	
R315	1-247-893-11	CARBON	390K	5%	1/4W	
R316	1-249-438-11	CARBON	56K	5%	1/4W	
R317	1-247-872-11	CARBON	51K	5%	1/4W	
R318	1-247-876-11	CARBON	75K	5%	1/4W	
R319	1-249-441-11	CARBON	100K	5%	1/4W	
R320	1-249-438-11	CARBON	56K	5%	1/4W	
R321	1-247-881-00	CARBON	120K	5%	1/4W	
R322	1-249-433-11	CARBON	22K	5%	1/4W	
R323	1-249-409-11	CARBON	220	5%	1/4W	
R324	1-249-433-11	CARBON	22K	5%	1/4W	
R325	1-249-433-11	CARBON	22K	5%	1/4W	
R326	1-249-425-11	CARBON	4.7K	5%	1/4W	
R327	1-247-887-00	CARBON	220K	5%	1/4W	
R328	1-249-429-11	CARBON	10K	5%	1/4W	
R329	1-249-441-11	CARBON	100K	5%	1/4W	
R330	1-249-428-11	CARBON	8.2K	5%	1/4W	
R331	1-249-423-11	CARBON	3.3K	5%	1/4W	
R332	1-249-417-11	CARBON	1K	5%	1/4W	
R333	1-249-441-11	CARBON	100K	5%	1/4W	
R334	1-249-441-11	CARBON	100K	5%	1/4W	
R335	1-249-419-11	CARBON	1.5K	5%	1/4W	
R336	1-247-850-11	CARBON	6.2K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	
R338	1-249-429-11	CARBON	10K	5%	1/4W	
R339	1-249-429-11	CARBON	10K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
R342	⚠1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R343	1-215-455-00	METAL	27K	1%	1/6W	
R344	1-247-864-11	CARBON	24K	5%	1/4W	
R345	1-249-437-11	CARBON	47K	5%	1/4W	
R601	1-249-410-11	CARBON	270	5%	1/4W	
R602	1-249-415-11	CARBON	680	5%	1/4W	
R701	1-249-429-11	CARBON	10K	5%	1/4W	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

MAIN MD

Ref. No.	Part No.	Description	Remarks
R702	1-249-429-11	CARBON 10K 5% 1/4W	
R703	1-249-425-11	CARBON 4.7K 5% 1/4W	
R704	1-249-425-11	CARBON 4.7K 5% 1/4W	
R705	1-249-425-11	CARBON 4.7K 5% 1/4W	
R706	1-247-903-00	CARBON 1M 5% 1/4W	
R707	1-249-433-11	CARBON 22K 5% 1/4W	
R708	1-249-411-11	CARBON 330 5% 1/4W	
R709	1-247-830-11	CARBON 910 5% 1/4W	
R710	1-249-418-11	CARBON 1.2K 5% 1/4W	
R711	1-249-417-11	CARBON 1K 5% 1/4W	
R712	⚠1-212-950-00	FUSIBLE 4.7 5% 1/2W	F
R713	1-249-421-11	CARBON 2.2K 5% 1/4W	
R714	1-249-419-11	CARBON 1.5K 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	⚠1-212-950-00	FUSIBLE 4.7 5% 1/2W	F
R717	1-249-436-11	CARBON 39K 5% 1/4W	
R718	1-249-436-11	CARBON 39K 5% 1/4W	
R719	1-247-887-00	CARBON 220K 5% 1/4W	
R720	1-247-887-00	CARBON 220K 5% 1/4W	
R721	1-249-425-11	CARBON 4.7K 5% 1/4W	
R722	1-249-425-11	CARBON 4.7K 5% 1/4W	
R724	1-249-433-11	CARBON 22K 5% 1/4W	
R725	1-247-903-00	CARBON 1M 5% 1/4W	
R726	1-249-429-11	CARBON 10K 5% 1/4W	
R727	1-249-425-11	CARBON 4.7K 5% 1/4W	
R728	1-249-425-11	CARBON 4.7K 5% 1/4W	
R729	1-249-425-11	CARBON 4.7K 5% 1/4W	
R730	1-249-433-11	CARBON 22K 5% 1/4W	
R731	1-249-433-11	CARBON 22K 5% 1/4W	
R732	1-249-424-11	CARBON 3.9K 5% 1/4W	
R733	1-249-429-11	CARBON 10K 5% 1/4W	
R734	1-249-441-11	CARBON 100K 5% 1/4W	
R735	1-249-439-11	CARBON 68K 5% 1/4W	
R736	1-249-417-11	CARBON 1K 5% 1/4W	
R737	1-249-417-11	CARBON 1K 5% 1/4W	
R738	⚠1-212-950-00	FUSIBLE 4.7 5% 1/2W	F
R739	1-249-429-11	CARBON 10K 5% 1/4W	
R740	1-249-429-11	CARBON 10K 5% 1/4W	
R741	1-249-415-11	CARBON 680 5% 1/4W	
R742	1-249-420-11	CARBON 1.8K 5% 1/4W	
R743	1-249-410-11	CARBON 270 5% 1/4W	
R744	1-249-421-11	CARBON 2.2K 5% 1/4W	
R745	1-249-421-11	CARBON 2.2K 5% 1/4W	
R746	1-249-421-11	CARBON 2.2K 5% 1/4W	
R747	1-249-421-11	CARBON 2.2K 5% 1/4W	
R748	1-249-429-11	CARBON 10K 5% 1/4W	
R749	1-249-429-11	CARBON 10K 5% 1/4W	
R771	1-249-405-11	CARBON 100 5% 1/4W	
R772	1-249-405-11	CARBON 100 5% 1/4W	
R773	1-249-405-11	CARBON 100 5% 1/4W	
R780	1-249-433-11	CARBON 22K 5% 1/4W	
R801	1-249-431-11	CARBON 15K 5% 1/4W	
R802	1-249-431-11	CARBON 15K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV101	1-238-597-11	RES, ADJ, CARBON 1K	
RV102	1-238-600-11	RES, ADJ, CARBON 10K	
RV103	1-238-601-11	RES, ADJ, CARBON 22K	
RV201	1-238-597-11	RES, ADJ, CARBON 1K	
RV202	1-238-600-11	RES, ADJ, CARBON 10K	
RV203	1-238-601-11	RES, ADJ, CARBON 22K	
RV301	1-241-232-11	RES, VAR, CARBON 20K/20K/20K(REC LEVEL)	
		< RELAY >	
RY301	1-515-726-11	RELAY	
		< SWITCH >	
S601	1-554-303-21	SWITCH, TACTILE (AUTO REC LEVEL)	
S605	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	
		< TRANSFORMER >	
T101	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T201	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T301	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T801	1-450-673-11	TRANSFORMER, DC-DC CONVERTER	
		< CRYSTAL >	
X701	1-577-358-21	VIBRATOR, CERAMIC 4MHz	
X702	1-577-358-21	VIBRATOR, CERAMIC 4MHz	

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Ref. No.	Part No.	Description	Remarks
	* 1-632-740-11	MD BOARD ********	
	3-356-631-01	HOLDER (SENSOR)	
		< CONNECTOR >	
CN1001	1-506-615-11	PIN, CONNECTOR 9P	
CN1002	* 1-564-502-11	PIN, CONNECTOR 10P	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
TB1001	* 1-569-066-11	PIN, CONNECTOR 5P	
		< IC >	
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B (SUPPLY REEL)	
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B (TAKE UP REEL)	
		< RESISTOR >	
R1001	1-249-408-11	CARBON 180 5% 1/4W	
R1002	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S1001	1-466-526-11	ENCODER, ROTARY	
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)	
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)	
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)	
S1005	1-572-125-11	SWITCH, LEAF (FWD TAB)	
S1006	1-572-202-11	SWITCH, LEAF (HALF)	
S1007	1-572-125-11	SWITCH, LEAF (METAL)	
S1008	1-572-125-11	SWITCH, LEAF (70uS)	
S1009	1-572-125-11	SWITCH, LEAF (REV TAB)	

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Ref. No.	Part No.	Description	Remarks
	* A-2006-453-A	PANEL BOARD, COMPLETE ********************	
	* 3-368-109-01	HOLDER, FL TUBE	
	* 4-921-941-01	CUSHION (FL)	
		< CAPACITOR >	
C601	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C602	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C603	1-163-137-00	CERAMIC CHIP 680P 10% 50V	
C604	1-163-137-00	CERAMIC CHIP 680P 10% 50V	
C605	1-163-137-00	CERAMIC CHIP 680P 10% 50V	
C606	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
		< CONNECTOR >	
CN601	* 1-568-858-11	SOCKET, CONNECTOR 15P	
CNP601	* 1-564-495-11	PIN, CONNECTOR 2P	
		< DIODE >	
D601	8-719-301-38	DIODE SEL2210-C	
D602	8-719-988-62	DIODE 1SS355	

Ref. No.	Part No.	Description	Remarks
D603	8-719-988-62	DIODE 1SS355	
		< INDICATOR >	
FL601	1-519-656-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC601	8-759-323-62	IC HD614023FA89	
		< RESISTOR >	
R603	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R604	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R605	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R606	1-216-029-00	METAL CHIP 150 5% 1/10W	
R607	1-216-033-00	METAL CHIP 220 5% 1/10W	
R608	1-216-037-00	METAL CHIP 330 5% 1/10W	
R609	1-216-041-00	METAL CHIP 470 5% 1/10W	
R610	1-216-045-00	METAL CHIP 680 5% 1/10W	
R611	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R612	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R613	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
R614	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R615	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R616	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R617	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R618	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R620	1-216-025-00	METAL CHIP 100 5% 1/10W	
R621	1-216-025-00	METAL CHIP 100 5% 1/10W	
R622	1-216-025-00	METAL CHIP 100 5% 1/10W	
		< SWITCH >	
S602	1-554-303-21	SWITCH, TACTILE (◁◁)	
S603	1-554-303-21	SWITCH, TACTILE (▷▷)	
S604	1-554-303-21	SWITCH, TACTILE (● REC)	
S606	1-554-303-21	SWITCH, TACTILE (□)	
S607	1-554-303-21	SWITCH, TACTILE (▷)	
S608	1-554-303-21	SWITCH, TACTILE (◁)	
S609	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)	
S610	1-554-303-21	SWITCH, TACTILE (○ MUTE)	
S611	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)	
S612	1-570-834-11	SWITCH, SLIDE (DOLBY NR)	
S613	1-570-842-11	SWITCH, SLIDE (DIRECTION MODE)	
		< CRYSTAL >	
X601	1-577-359-21	VIBRATOR, CERAMIC 4.19MHz	

PIN JACK

Ref. No.	Part No.	Description				Remarks
		**				
	* A-2006-548-A	PIN JACK BOARD, COMPLETE				
		************************				
		< CAPACITOR >				
C401	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C402	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C404	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C405	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C407	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C409	1-124-465-00	ELECT	0.47uF	20%	50V	
C410	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C411	1-126-163-11	ELECT	4.7uF	20%	50V	
C412	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	
C413	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	
C414	1-124-257-00	ELECT	2.2uF	20%	50V	
C416	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C417	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C418	1-126-157-11	ELECT	10uF	20%	16V	
C419	1-126-157-11	ELECT	10uF	20%	16V	
C451	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C452	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C453	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C454	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C455	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C459	1-124-465-00	ELECT	0.47uF	20%	50V	
C460	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C461	1-126-163-11	ELECT	4.7uF	20%	50V	
C462	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	
C463	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	
C464	1-124-257-00	ELECT	2.2uF	20%	50V	
C466	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C467	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C468	1-126-012-11	ELECT	470uF	20%	16V	
C469	1-126-012-11	ELECT	470uF	20%	16V	
C470	1-126-012-11	ELECT	470uF	20%	16V	
C481	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C482	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C483	1-126-177-11	ELECT	100uF	20%	10V	
C484	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C485	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C486	1-126-157-11	ELECT	10uF	20%	16V	
C487	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C488	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C489	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C490	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C491	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C492	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C493	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C494	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C495	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C496	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C497	1-126-301-11	ELECT	1uF	20%	50V	
C4001	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C4002	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C4003	1-124-589-11	ELECT	47uF	20%	16V	
C4010	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4013	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4020	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4021	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4022	1-124-589-11	ELECT	47uF	20%	16V	
		< CONNECTOR >				
CN401	* 1-568-834-11	SOCKET, CONNECTOR 15P				
CNJ401	* 1-580-740-11	SOCKET, CONNECTOR 17P				
CNJ402	* 1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P				
CNJ403	* 1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P				
		< DIODE >				
D401	8-719-990-36	DIODE	DCA010			
D403	8-719-210-33	DIODE	EC10DS2			
D404	8-719-210-33	DIODE	EC10DS2			
D405	8-719-990-36	DIODE	DCA010			
D4001	8-719-988-62	DIODE	1SS355			
D4002	8-719-988-62	DIODE	1SS355			
		< IC >				
IC401	8-759-636-55	IC	M5218AFP			
IC402	8-759-636-55	IC	M5218AFP			
IC403	8-759-009-05	IC	MC14051BF			
IC404	8-759-009-05	IC	MC14051BF			
IC405	8-759-516-47	IC	CD4066BCM			
IC406	8-759-636-35	IC	M50760-315FP			
IC407	8-759-991-77	IC	BA7625			

PIN JACK

Ref. No.	Part No.	Description	Remarks
		(JACK)	
J401	1-565-304-11	JACK, PIN 4P (AUDIO)	
J402	* 1-569-812-11	JACK, PIN 6P (AUDIO)	
J403	1-565-933-11	JACK, PIN 3P (VIDEO)	
J404	1-573-144-11	JACK, PIN 2P (VIDEO)	
		(JUMPER)	
JW2	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW3	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW8	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW10	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW12	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW413	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW414	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW439	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW441	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW463	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW464	1-216-295-00	METAL CHIP 0 5% 1/10W	
		(COIL)	
L401	1-408-789-21	INDUCTOR, CHIP 100uH	
L4001	1-408-777-00	INDUCTOR, CHIP 10uF	
		(TRANSISTOR)	
Q401	8-729-805-65	TRANSISTOR 2SA1344	
Q402	8-729-805-65	TRANSISTOR 2SA1344	
Q403	8-729-602-36	TRANSISTOR 2SA1602-F	
Q404	8-729-602-36	TRANSISTOR 2SA1602-F	
Q405	8-729-602-36	TRANSISTOR 2SA1602-F	
Q406	8-729-602-36	TRANSISTOR 2SA1602-F	
Q407	8-729-602-21	TRANSISTOR 2SC4154-F	
		(RESISTOR)	
R401	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R402	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R403	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R404	1-216-041-00	METAL CHIP 470 5% 1/10W	
R405	1-216-041-00	METAL CHIP 470 5% 1/10W	
R407	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R408	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R409	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R410	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R411	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R415	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R417	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R418	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R419	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R420	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R421	1-216-001-00	METAL CHIP 10 5% 1/10W	
R422	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R423	1-216-041-00	METAL CHIP 470 5% 1/10W	
R425	1-216-025-00	METAL CHIP 100 5% 1/10W	
R426	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R427	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R428	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R429	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R430	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R431	1-216-022-00	METAL CHIP 75 5% 1/10W	
R432	1-216-022-00	METAL CHIP 75 5% 1/10W	
R434	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R435	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R436	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R437	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R440	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R442	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R450	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R451	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R452	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R453	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R454	1-216-041-00	METAL CHIP 470 5% 1/10W	
R455	1-216-041-00	METAL CHIP 470 5% 1/10W	
R457	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R458	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R459	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R460	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R461	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R465	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R467	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R468	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R469	1-216-115-00	METAL CHIP 560K 5% 1/10W	
R470	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R471	1-216-001-00	METAL CHIP 10 5% 1/10W	
R472	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R473	1-216-041-00	METAL CHIP 470 5% 1/10W	
R475	1-216-025-00	METAL CHIP 100 5% 1/10W	
R476	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R477	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R478	1-216-089-00	METAL CHIP 47K 5% 1/10W	

PIN JACK POWER

Ref. No.	Part No.	Description	Remarks
R481	1-216-022-00	METAL CHIP 75 5% 1/10W	
R482	1-216-022-00	METAL CHIP 75 5% 1/10W	
R483	1-216-022-00	METAL CHIP 75 5% 1/10W	
R484	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R485	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R486	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R487	1-216-029-00	METAL CHIP 150 5% 1/10W	
R488	1-216-029-00	METAL CHIP 150 5% 1/10W	
R489	1-216-031-00	METAL CHIP 180 5% 1/10W	
R490	1-216-031-00	METAL CHIP 180 5% 1/10W	
R491	1-216-031-00	METAL CHIP 180 5% 1/10W	
R492	1-216-029-00	METAL CHIP 150 5% 1/10W	
R493	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R494	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R495	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R496	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R497	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R499	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R500	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

(CRYSTAL)

Ref. No.	Part No.	Description	Remarks
X401	1-577-077-11	OSCILLATOR, CERAMIC 400KHz	

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Ref. No.	Part No.	Description	Remarks
	* 1-639-415-11	POWER BOARD ***********	
	7-685-646-79	SCREW +BVTP 3X8 TYPE N-S	

(CAPACITOR)

Ref. No.	Part No.	Description	Remarks
C501	1-124-556-11	ELECT 2200uF 20% 16V	
C502	1-124-556-11	ELECT 2200uF 20% 16V	
C503	1-124-360-00	ELECT 1000uF 20% 16V	
C504	1-124-556-11	ELECT 2200uF 20% 16V	
C505	1-126-059-11	ELECT 10uF 20% 50V	
C506	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C507	1-124-903-11	ELECT 1uF 20% 50V	
C508	1-124-472-11	ELECT 470uF 20% 10V	
C509	1-124-472-11	ELECT 470uF 20% 10V	
C510	1-124-477-11	ELECT 47uF 20% 25V	
C511	1-124-903-11	ELECT 1uF 20% 50V	
C512	1-124-477-11	ELECT 47uF 20% 25V	
C513	1-124-903-11	ELECT 1uF 20% 50V	
C514	1-124-472-11	ELECT 470uF 20% 10V	
C515	1-124-477-11	ELECT 47uF 20% 25V	
C516	1-124-903-11	ELECT 1uF 20% 50V	
C518	1-124-473-11	ELECT 1000uF 20% 10V	
C519	1-124-473-11	ELECT 1000uF 20% 10V	
C520	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C521	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C526	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C527	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C528	1-164-232-11	CERAMIC CHIP 0.01uF 10% 50V	
C5001	1-163-009-11	CERAMIC CHIP 1000P 10% 50V	
C5002	1-163-009-11	CERAMIC CHIP 1000P 10% 50V	
C5004	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C5005	1-164-232-11	CERAMIC CHIP 0.01uF 10% 50V	
C5007	1-164-346-11	CERAMIC CHIP 1uF 16V	

(CONNECTOR)

Ref. No.	Part No.	Description	Remarks
CN402	* 1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P	
CN403	* 1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P	

(DIODE)

Ref. No.	Part No.	Description	Remarks
D501	8-719-210-33	DIODE EC10DS2	
D502	8-719-210-33	DIODE EC10DS2	
D503	8-719-210-33	DIODE EC10DS2	
D504	8-719-210-33	DIODE EC10DS2	
D505	8-719-988-62	DIODE 1SS355	
D506	8-719-106-36	DIODE RD8.2M-B3	
D508	8-719-210-33	DIODE EC10DS2	
D509	8-719-210-33	DIODE EC10DS2	
D510	8-719-210-33	DIODE EC10DS2	
D511	8-719-210-33	DIODE EC10DS2	

(FUSE)

Ref. No.	Part No.	Description	Remarks
F501	⚠1-532-843-21	FUSE 2.5A	
F502	⚠1-532-843-21	FUSE 2.5A	

(IC)

Ref. No.	Part No.	Description	Remarks
IC501	8-759-823-46	IC LA5603	

(TRANSISTOR)

Ref. No.	Part No.	Description	Remarks
Q501	8-729-209-15	TRANSISTOR 2SD2012	
Q502	8-729-111-67	TRANSISTOR 2SB1094-L	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-602-21	TRANSISTOR 2SC4154-F	
Q505	8-729-602-21	TRANSISTOR 2SC4154-F	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
Q506	8-729-602-36	TRANSISTOR 2SA1602-EF	
Q510	8-729-805-49	TRANSISTOR 2SC3398	
Q511	8-729-602-36	TRANSISTOR 2SA1602-EF	
		< RESISTOR >	
R501	1-216-033-00	METAL CHIP 220 5% 1/10W	
R502	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R503	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R504	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R505	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R520	1-216-058-00	METAL CHIP 2.4K 5% 1/10W	
R521	1-216-056-00	METAL CHIP 2K 5% 1/10W	
R5001	1-216-025-00	METAL CHIP 100 5% 1/10W	
R5002	1-216-025-00	METAL CHIP 100 5% 1/10W	

****

Ref. No.	Part No.	Description	Remarks
	* 1-632-741-11	REEL MOTOR BOARD ****************	
		< CAPACITOR >	
C1051	1-124-907-11	ELECT 10uF 20% 50V	
C1052	1-124-907-11	ELECT 10uF 20% 50V	
C1053	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
CN1051	* 1-564-499-11	PIN, CONNECTOR 6P	
CN1052	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
CN1053	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
		< RESISTOR >	
R1051	1-249-414-11	CARBON 560 5% 1/4W	

****

Ref. No.	Part No.	Description	Remarks
	* 1-634-323-11	TRANSLATION BOARD *****************	
		< CONNECTOR >	
CN1091	* 1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P	
CN1092	* 1-564-509-11	PLUG, CONNECTOR 6P	

****

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS *************	
4	1-575-906-11	WIRE, FLAT TYPE (15 CORE)	
11	* 1-573-188-11	CONNECTOR, BRIDGE 7P	
12	* 1-573-389-11	COONECTOR, BRIDGE 8P	
13	1-575-664-11	WIRE, FLAT TYPE (15 CORE)	
D1051	8-719-980-85	DIODE SLF-325C	
HRPE1001	A-2003-772-A	BASE ASSY, HEAD	
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY	
S1001	1-466-525-11	ENCODER, ROTARY	

****

HARDWARE LIST

****

Ref. No.	Part No.	Description	Remarks
# 1	7-621-773-93	SCREW (PANEL 2.6 TP2)	
# 2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
# 3	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 4	7-621-283-00	SCREW +BVTT 2X5 (S)	
# 5	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
# 6	7-621-255-20	SCREW +BVTT 2X4 (S)	
# 7	7-621-255-35	SCREW +BVTT 2X5 (S)	
# 8	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
# 9	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
#10	7-621-849-00	SCREW (BV/RING)	
# 11	7-621-255-15	SCREW +PTT 2X3 (S)	

English
91F1667-1

Sony Corporation
Audio Group

9-956-358-11

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Printed by: Schaltungsdienst Lange, Berlin (Germany)

Published by Customer Relations and Service Group

TC-H5600

SONY

SERVICE MANUAL

AEP Model
UK Model
E Model

SUPPLEMENT-1

File this Supplement with the Service Manual.

Subject : Circuit change

English
9410976-1

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Published by Home A&V Products Div.
Quality Engineering Dept.

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

9-956-358-81

SECTION 6
ELECTRICAL PARTS LIST

MAIN

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.

- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remark
*	A-2006-452-A	MAIN BOARD, COMPLETE			
		********************			
*	1-573-496-11	HOUSING, CONNECTOR 12P			
*	1-573-497-11	PIN, CONNECTOR (PC BOARD) 12P BOARD			
*	3-356-925-01	HEAT SINK			
	7-682-548-04	SCREW +BVTT 3X8 (S)			
		< CAPACITOR >			
C101	1-162-294-31	CERAMIC	0.001uF	10%	50V
C102	1-136-157-00	FILM	0.022uF	5%	50V
C103	1-124-282-00	ELECT	22uF	20%	25V
C105	1-136-158-00	FILM	0.027uF	5%	50V
C106	1-162-294-31	CERAMIC	0.001uF	10%	50V
C107	1-124-907-11	ELECT	10uF	20%	50V
C108	1-124-916-11	ELECT	22uF	20%	63V
C109	1-130-475-00	MYLAR	0.0022uF	5%	50V
C110	1-130-475-00	MYLAR	0.0022uF	5%	50V
C111	1-136-174-00	FILM	0.56uF	5%	50V
C112	1-136-171-00	FILM	0.33uF	5%	50V
C113	1-124-907-11	ELECT	10uF	20%	50V
C114	1-124-902-00	ELECT	0.47uF	20%	50V
C115	1-124-927-11	ELECT	4.7uF	20%	100V
C116	1-124-927-11	ELECT	4.7uF	20%	100V
C117	1-124-925-11	ELECT	2.2uF	20%	100V
C118	1-162-285-31	CERAMIC	180PF	10%	50V
C119	1-136-935-11	FILM	22PF	5%	630V
C120	1-130-468-00	MYLAR	560PF	5%	50V
C121	1-136-433-11	FILM	100PF	5%	630V
C122	1-136-272-00	FILM	68PF	5%	630V
C123	1-136-153-00	FILM	0.01uF	5%	50V
C124	1-136-165-00	FILM	0.1uF	5%	50V
C125	1-136-157-00	FILM	0.022uF	5%	50V
C201	1-162-294-31	CERAMIC	0.001uF	10%	50V
C202	1-136-157-00	FILM	0.022uF	5%	50V
C203	1-124-282-00	ELECT	22uF	20%	25V
C205	1-136-158-00	FILM	0.027uF	5%	50V
C206	1-162-294-31	CERAMIC	0.001uF	10%	50V
C207	1-124-907-11	ELECT	10uF	20%	50V
C208	1-124-916-11	ELECT	22uF	20%	63V
C209	1-130-475-00	MYLAR	0.0022uF	5%	50V
C210	1-130-475-00	MYLAR	0.0022uF	5%	50V
C211	1-136-174-00	FILM	0.56uF	5%	50V
C212	1-136-171-00	FILM	0.33uF	5%	50V

Ref. No.	Part No.	Description			Remark
C213	1-124-907-11	ELECT	10uF	20%	50V
C214	1-124-902-00	ELECT	0.47uF	20%	50V
C215	1-124-927-11	ELECT	4.7uF	20%	100V
C216	1-124-927-11	ELECT	4.7uF	20%	100V
C217	1-124-925-11	ELECT	2.2uF	20%	100V
C218	1-162-285-31	CERAMIC	180PF	10%	50V
C219	1-136-935-11	FILM	22PF	5%	630V
C220	1-130-468-00	MYLAR	560PF	5%	50V
C221	1-136-433-11	FILM	100PF	5%	630V
C222	1-136-272-00	FILM	68PF	5%	630V
C223	1-136-153-00	FILM	0.01uF	5%	50V
C224	1-136-165-00	FILM	0.1uF	5%	50V
C225	1-136-157-00	FILM	0.022uF	5%	50V
C301	1-124-443-00	ELECT	100uF	20%	10V
C302	1-124-443-00	ELECT	100uF	20%	10V
C303	1-124-907-11	ELECT	10uF	20%	50V
C304	1-124-907-11	ELECT	10uF	20%	50V
C305	1-124-478-11	ELECT	100uF	20%	25V
C306	1-124-925-11	ELECT	2.2uF	20%	100V
C307	1-124-902-00	ELECT	0.47uF	20%	50V
C308	1-162-215-31	CERAMIC	47PF	5%	50V
C309	1-161-494-00	CERAMIC	0.022uF		25V
C310	1-162-286-31	CERAMIC	220PF	10%	50V
C311	1-124-925-11	ELECT	2.2uF	20%	100V
C312	1-124-477-11	ELECT	47uF	20%	25V
C313	1-124-902-00	ELECT	0.47uF	20%	50V
C314	1-124-478-11	ELECT	100uF	20%	25V
C315	1-124-478-11	ELECT	100uF	20%	25V
C316	1-130-856-00	FILM	0.0068uF	5%	100V
C317	1-136-230-00	FILM	0.0022uF	5%	100V
C318	1-136-230-00	FILM	0.0022uF	5%	100V
C319	1-124-907-11	ELECT	10uF	20%	50V
C320	1-161-494-00	CERAMIC	0.022uF		25V
C321	1-136-558-11	FILM	0.0039uF	5%	630V
C322	1-107-585-11	CERAMIC	5PF	0.25PF	500V
C701	1-124-443-00	ELECT	100uF	20%	10V
C702	1-164-159-11	CERAMIC	0.1uF		50V
C703	1-164-159-11	CERAMIC	0.1uF		50V
C704	1-164-159-11	CERAMIC	0.1uF		50V
C705	1-124-443-00	ELECT	100uF	20%	10V
C706	1-124-925-11	ELECT	2.2uF	20%	100V
C707	1-164-159-11	CERAMIC	0.1uF		50V
C708	1-136-165-00	FILM	0.1uF	5%	50V

Ref. No.	Part No.	Description	Remark
C709	1-136-165-00	FILM 0.1uF 5%	50V
C720	1-164-159-11	CERAMIC 0.1uF	50V
C750	1-161-494-00	CERAMIC 0.022uF	25V
C751	1-161-494-00	CERAMIC 0.022uF	25V
C752	1-161-494-00	CERAMIC 0.022uF	25V
C753	1-161-494-00	CERAMIC 0.022uF	25V
C754	1-161-494-00	CERAMIC 0.022uF	25V
C801	1-124-907-11	ELECT 10uF 20%	50V
C802	1-136-594-11	FILM 0.018uF 5%	100V
C803	1-124-907-11	ELECT 10uF 20%	50V

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN701	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN702	1-568-834-11	SOCKET, CONNECTOR 15P	
* CNP301	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CNP302	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CNP303	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
CNP304	1-564-511-11	PLUG, CONNECTOR 8P	
* CNP305	1-564-518-11	PLUG, CONNECTOR 3P	
* CNP702	1-564-339-00	PIN, CONNECTOR 5P	
* CNP703	1-564-505-11	PLUG, CONNECTOR 2P	
* CNP707	1-564-342-11	PIN, CONNECTOR 8P	
* CNP708	1-564-336-61	PIN, CONNECTOR 2P	

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description	Remark
CP701	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
CP702	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
CP703	1-232-944-11	COMPOSITION CIRCUIT BLOCK	

< DIODE >

Ref. No.	Part No.	Description	Remark
D101	8-719-987-63	DIODE 1N4148M	
D201	8-719-987-63	DIODE 1N4148M	
D301	8-719-987-63	DIODE 1N4148M	
D302	8-719-987-63	DIODE 1N4148M	
D303	8-719-987-63	DIODE 1N4148M	
D304	8-719-933-50	DIODE HZS7C2L	
D305	8-719-987-63	DIODE 1N4148M	
D306	8-719-987-63	DIODE 1N4148M	
D307	8-719-987-63	DIODE 1N4148M	
D308	8-719-987-63	DIODE 1N4148M	
D309	8-719-987-63	DIODE 1N4148M	
D601	8-719-301-38	DIODE SEL2210S-C (AUTO REC LEVEL)	
D701	8-719-987-63	DIODE 1N4148M	
D702	8-719-987-63	DIODE 1N4148M	
D703	8-719-933-50	DIODE HZS7C2L	
D704	8-719-933-50	DIODE HZS7C2L	
D705	8-719-933-50	DIODE HZS7C2L	
D706	8-719-933-50	DIODE HZS7C2L	
D707	8-719-933-50	DIODE HZS7C2L	
D708	8-719-933-50	DIODE HZS7C2L	

Ref. No.	Part No.	Description	Remark
D709	8-719-933-50	DIODE HZS7C2L	
D710	8-719-933-50	DIODE HZS7C2L	
D711	8-719-933-50	DIODE HZS7C2L	
D712	8-719-933-50	DIODE HZS7C2L	
D713	8-719-987-63	DIODE 1N4148M	
D714	8-719-987-63	DIODE 1N4148M	
D720	8-719-200-77	DIODE 10E2N	
D721	8-719-200-77	DIODE 10E2N	
D722	8-719-200-77	DIODE 10E2N	
D750	8-719-933-47	DIODE HZS7B2L	
D751	8-719-933-47	DIODE HZS7B2L	
D752	8-719-987-63	DIODE 1N4148M	
D753	8-719-987-63	DIODE 1N4148M	
D754	8-719-987-63	DIODE 1N4148M	
D801	8-719-109-89	DIODE RD5.6ESB2	
D802	8-719-200-77	DIODE 10E2N	
D803	8-719-200-77	DIODE 10E2N	
D804	8-719-200-77	DIODE 10E2N	
D805	8-719-200-77	DIODE 10E2N	

< IC >

Ref. No.	Part No.	Description	Remark
IC301	8-759-111-44	IC uPC4570C-1	
IC302	8-752-059-56	IC CXA1330S	
IC303	8-752-060-64	IC CXA1198AP	
IC304	8-759-145-58	IC uPC4558C	
IC305	8-759-145-58	IC uPC4558C	
IC306	8-759-106-56	IC uPC1297CA	
IC701	8-759-633-86	IC M50747-B83SP	
IC702	8-759-634-79	IC M50944-155SP	
IC703	8-759-973-95	IC BA6219B	
IC704	8-759-822-09	IC LB1641	
IC705	8-759-240-69	IC TC4069UBP	
IC706	8-759-822-09	IC LB1641	

< COIL >

Ref. No.	Part No.	Description	Remark
L101	1-410-780-11	INDUCTOR 27mH	
L201	1-410-780-11	INDUCTOR 27mH	
L301	1-408-080-00	INDUCTOR 100uH	
L801	1-410-761-11	INDUCTOR 0.68mH	
L802	1-410-521-11	INDUCTOR 100uH	
L803	1-410-521-11	INDUCTOR 100uH	

< FILTER >

Ref. No.	Part No.	Description	Remark
LPF101	1-236-087-11	FILTER, LOW PASS	
LPF201	1-236-087-11	FILTER, LOW PASS	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q101	8-729-900-89	TRANSISTOR DTC144ES	
Q102	8-729-900-74	TRANSISTOR DTC143TS	
Q103	8-729-821-31	TRANSISTOR 2SD1012-FG	

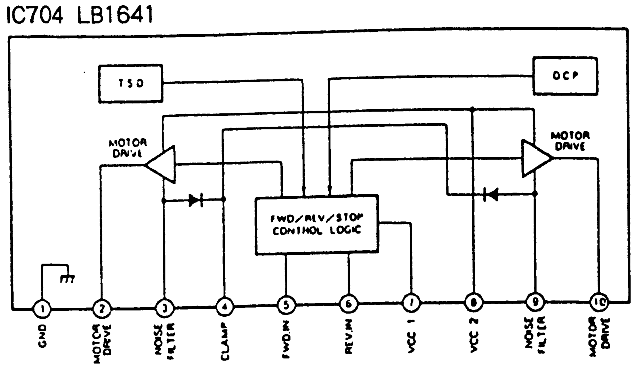
MAIN

Ref.No.	Part No.	Description					Remark
Q201	8-729-900-89	TRANSISTOR	DTC144ES				
Q202	8-729-900-74	TRANSISTOR	DTC143TS				
Q203	8-729-821-31	TRANSISTOR	2SD1012-FG				
Q301	8-729-900-65	TRANSISTOR	DTA144ES				
Q302	8-729-900-89	TRANSISTOR	DTC144ES				
Q303	8-729-900-89	TRANSISTOR	DTC144ES				
Q304	8-729-820-24	TRANSISTOR	2SC3330-T				
Q305	8-729-900-89	TRANSISTOR	DTC144ES				
Q306	8-729-821-04	TRANSISTOR	2SA1317-STU				
Q307	8-729-900-65	TRANSISTOR	DTA144ES				
Q308	8-729-900-65	TRANSISTOR	DTA144ES				
Q309	8-729-900-89	TRANSISTOR	DTC144ES				
Q310	8-729-900-65	TRANSISTOR	DTA144ES				
Q311	8-729-900-61	TRANSISTOR	DTA114ES				
Q312	8-729-900-80	TRANSISTOR	DTC114ES				
Q313	8-729-900-80	TRANSISTOR	DTC114ES				
Q314	8-729-900-80	TRANSISTOR	DTC114ES				
Q315	8-729-821-04	TRANSISTOR	2SA1317-STU				
Q316	8-729-194-57	TRANSISTOR	2SC945-P				
Q317	8-729-194-57	TRANSISTOR	2SC945-P				
Q318	8-729-900-65	TRANSISTOR	DTA144ES				
Q701	8-729-900-80	TRANSISTOR	DTC114ES				
Q702	8-729-900-80	TRANSISTOR	DTC114ES				
Q703	8-729-900-80	TRANSISTOR	DTC114ES				
Q704	8-729-820-24	TRANSISTOR	2SC3330-T				
Q705	8-729-820-24	TRANSISTOR	2SC3330-T				
Q706	8-729-900-89	TRANSISTOR	DTC144ES				
Q707	8-729-821-04	TRANSISTOR	2SA1317-STU				
Q708	8-729-900-61	TRANSISTOR	DTA114ES				
Q709	8-729-900-61	TRANSISTOR	DTA114ES				
Q712	8-729-900-65	TRANSISTOR	DTA144ES				
Q713	8-729-900-65	TRANSISTOR	DTA144ES				
Q715	8-729-900-80	TRANSISTOR	DTC114ES				
Q720	8-729-900-80	TRANSISTOR	DTC114ES				
Q721	8-729-801-84	TRANSISTOR	2SB1013-4				
Q801	8-729-140-96	TRANSISTOR	2SD774-34				
Q802	8-729-140-96	TRANSISTOR	2SD774-34				
		< RESISTOR >					
R101	1-249-435-11	CARBON		33K	5%	1/4W	
R102	1-249-403-11	CARBON		68	5%	1/4W	F
R103	1-247-882-11	CARBON		130K	5%	1/4W	
R104	1-249-426-11	CARBON		5.6K	5%	1/4W	
R105	1-249-420-11	CARBON		1.8K	5%	1/4W	F
R107	1-247-887-00	CARBON		220K	5%	1/4W	
R108	1-247-840-00	CARBON		2.4K	5%	1/4W	
R110	1-249-423-11	CARBON		3.3K	5%	1/4W	F
R111	1-249-428-11	CARBON		8.2K	5%	1/4W	F
R112	1-247-864-11	CARBON		24K	5%	1/4W	
R113	1-249-414-11	CARBON		560	5%	1/4W	F
R115	1-249-421-11	CARBON		2.2K	5%	1/4W	F
R116	1-249-428-11	CARBON		8.2K	5%	1/4W	F
R117	1-249-417-11	CARBON		1K	5%	1/4W	F
R118	1-249-429-11	CARBON		10K	5%	1/4W	
R119	1-249-425-11	CARBON		4.7K	5%	1/4W	F
R120	1-249-421-11	CARBON		2.2K	5%	1/4W	F
R121	1-249-429-11	CARBON		10K	5%	1/4W	
R122	1-249-425-11	CARBON		4.7K	5%	1/4W	F
R124	1-249-429-11	CARBON		10K	5%	1/4W	
R125	1-249-437-11	CARBON		47K	5%	1/4W	
R126	1-249-431-11	CARBON		15K	5%	1/4W	
R127	1-249-409-11	CARBON		220	5%	1/4W	F
R128	1-249-428-11	CARBON		8.2K	5%	1/4W	F
R129	1-247-883-00	CARBON		150K	5%	1/4W	
R130	1-249-393-11	CARBON		10	5%	1/4W	F
R131	1-249-432-11	CARBON		18K	5%	1/4W	
R132	1-249-429-11	CARBON		10K	5%	1/4W	
R201	1-249-435-11	CARBON		33K	5%	1/4W	
R202	1-249-403-11	CARBON		68	5%	1/4W	F
R203	1-247-882-11	CARBON		130K	5%	1/4W	
R204	1-249-426-11	CARBON		5.6K	5%	1/4W	
R205	1-249-420-11	CARBON		1.8K	5%	1/4W	F
R207	1-247-887-00	CARBON		220K	5%	1/4W	
R208	1-247-840-00	CARBON		2.4K	5%	1/4W	
R210	1-249-423-11	CARBON		3.3K	5%	1/4W	F
R211	1-249-428-11	CARBON		8.2K	5%	1/4W	F
R212	1-247-864-11	CARBON		24K	5%	1/4W	
R213	1-249-414-11	CARBON		560	5%	1/4W	F
R215	1-249-421-11	CARBON		2.2K	5%	1/4W	F
R216	1-249-428-11	CARBON		8.2K	5%	1/4W	F
R217	1-249-417-11	CARBON		1K	5%	1/4W	F
R218	1-249-429-11	CARBON		10K	5%	1/4W	
R219	1-249-425-11	CARBON		4.7K	5%	1/4W	F
R220	1-249-421-11	CARBON		2.2K	5%	1/4W	F
R221	1-249-429-11	CARBON		10K	5%	1/4W	
R222	1-249-425-11	CARBON		4.7K	5%	1/4W	F
R224	1-249-429-11	CARBON		10K	5%	1/4W	
R225	1-249-437-11	CARBON		47K	5%	1/4W	
R226	1-249-431-11	CARBON		15K	5%	1/4W	
R227	1-249-409-11	CARBON		220	5%	1/4W	F
R228	1-249-428-11	CARBON		8.2K	5%	1/4W	F
R229	1-247-883-00	CARBON		150K	5%	1/4W	
R230	1-249-393-11	CARBON		10	5%	1/4W	F
R231	1-249-432-11	CARBON		18K	5%	1/4W	
R232	1-249-429-11	CARBON		10K	5%	1/4W	
R301	1-249-409-11	CARBON		220	5%	1/4W	F
R302	1-249-409-11	CARBON		220	5%	1/4W	F
R303	1-249-433-11	CARBON		22K	5%	1/4W	
R304	1-249-435-11	CARBON		33K	5%	1/4W	
R305	1-249-436-11	CARBON		39K	5%	1/4W	

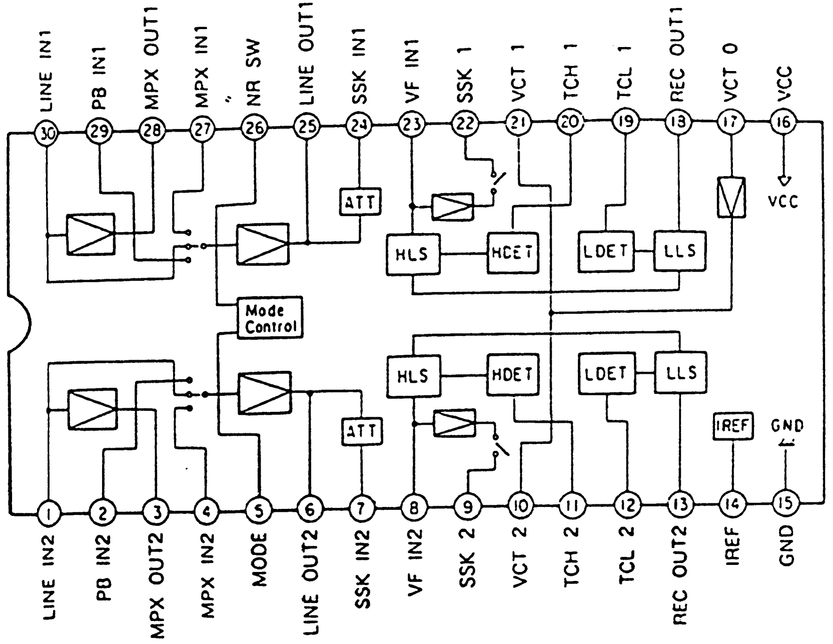
Continued on page 15.

- **IC BLOCK DIAGRAM**

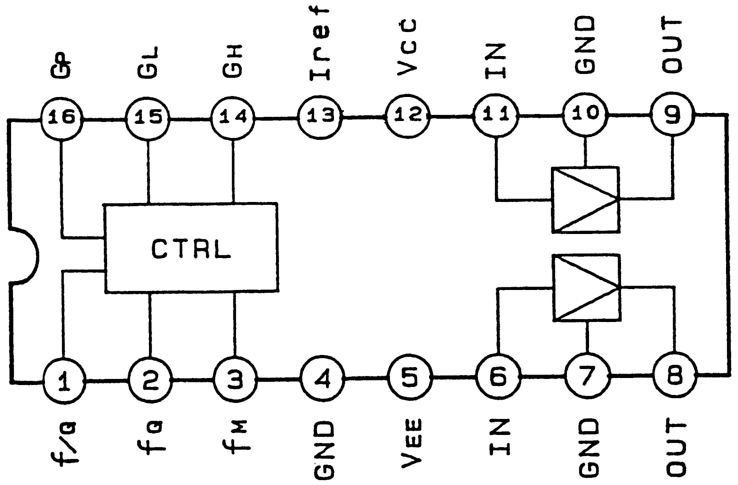
IC703,706 BA6219B
IC704 LB1641


TSD
OCP
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTROL LOGIC
GND
MOTOR DRIVE
NOISE FILTER
CLAMP
FWD IN
REV IN
VCC 1
VCC 2
NOISE FILTER
MOTOR DRIVE

IC302 CXA1330S


LINE IN1
PB IN1
MPX OUT1
MPX IN1
NR SW
LINE OUT1
SSK IN1
VF IN1
SSK 1
VCT 1
TCH 1
TCL 1
REC OUT1
VCT 0
VCC
ATT
HLS
HDET
LDET
LLS
Mode Control
IREF
GND
LINE IN2
PB IN2
MPX OUT2
MPX IN2
MODE
LINE OUT2
SSK IN2
VF IN2
SSK 2
VCT 2
TCH 2
TCL 2
REC OUT2
IREF
GND

IC303 CXA1198AP

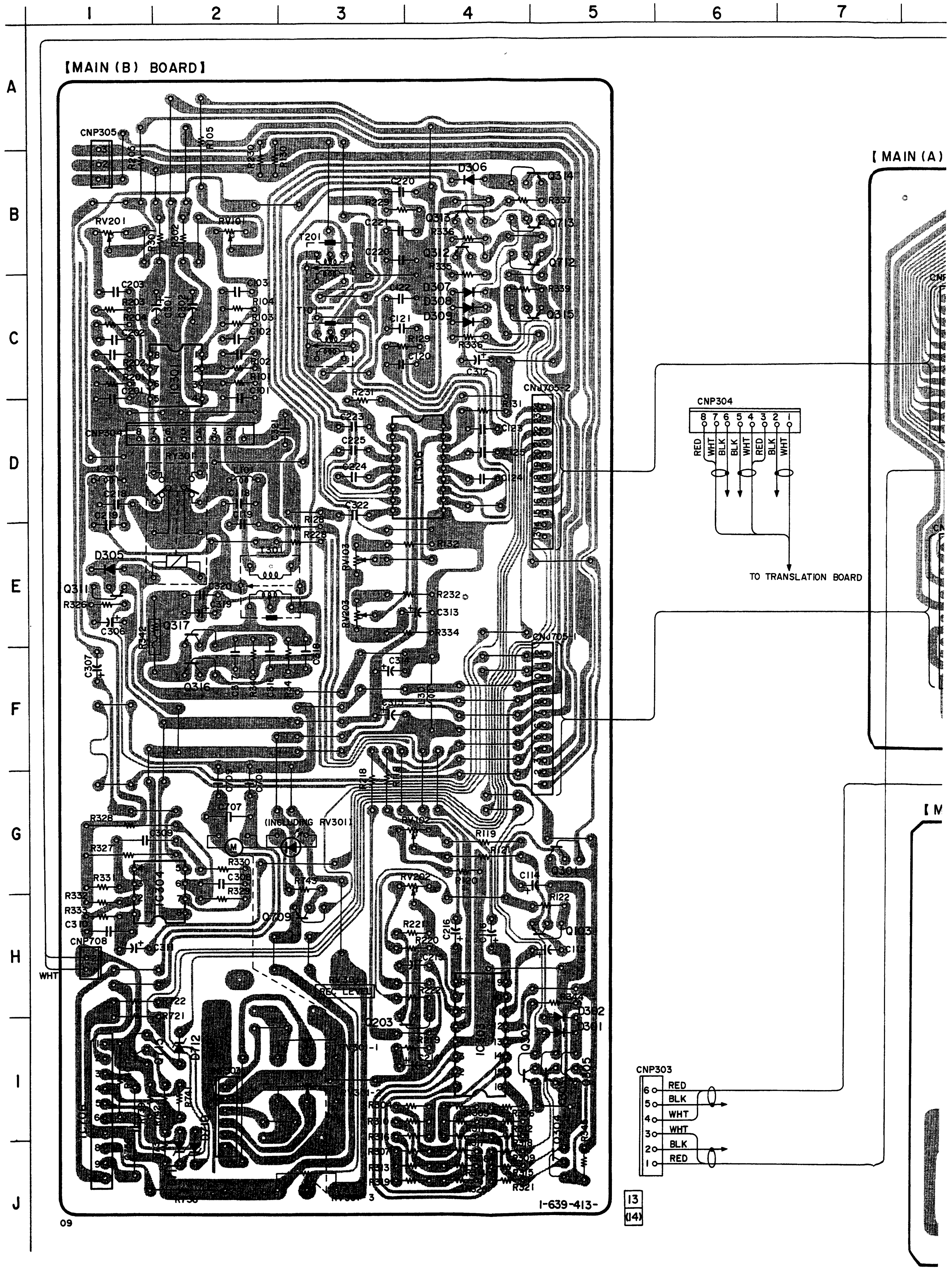

Gp
GL
GH
Iref
Vcc
IN
GND
OUT
CTRL
f/Q
fQ
fM
GND
VEE
IN
GND
OUT

- Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C-12	Q301	G-5
D201	C-13	Q302	I-5
D301	I-5	Q303	I-5
D302	I-5	Q304	J-5
D303	E-11	Q305	I-5
D304	E-11	Q306	D-11
D305	E-1	Q307	E-11
D306	B-4	Q308	F-11
D307	C-4	Q309	E-11
D308	C-4	Q310	E-11
D309	C-4	Q311	E-1
D601	A-20	Q312	B-4
D701	C-17	Q313	B-4
D702	C-17	Q314	B-5
D703	E-12	Q315	C-5
D704	E-12	Q316	F-2
D705	F-12	Q317	E-2
D706	F-12	Q318	F-11
D707	E-14	Q701	F-13
D708	E-14	Q702	F-13
D709	E-13	Q703	E-13
D710	J-2	Q704	D-17
D711	J-2	Q705	C-17
D712	I-2	Q706	C-15
D713	C-15	Q707	C-17
D714	C-17	Q708	B-19
D720	C-10	Q709	H-3
D721	C-11	Q712	B-5
D722	C-12	Q713	B-5
D750	B-13	Q715	I-1
D751	D-14	Q720	I-8
D752	B-19	Q721	J-8
D753	A-19	Q801	B-13
D754	I-8	Q802	B-11
D801	D-16		
D802	C-15		
D803	C-15		
D804	C-14		
D805	C-14		
IC301	C-2		
IC302	E-9		
IC303	I-4		
IC304	H-2		
IC305	D-13		
IC306	D-4		
IC701	E-16		
IC702	B-15		
IC703	E-13		
IC704	D-13		
IC705	D-15		
IC706	I-1		
IC1001	H-18		
IC1002	H-19		
Q101	D-10		
Q102	D-11		
Q103	H-5		
Q201	F-10		
Q202	D-11		
Q203	I-4		

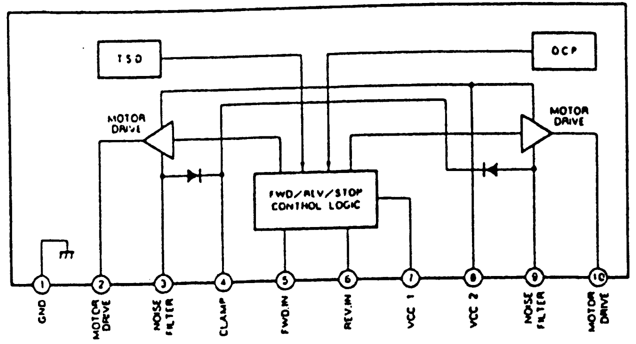
Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ▪ : parts mounted on the couductor side.

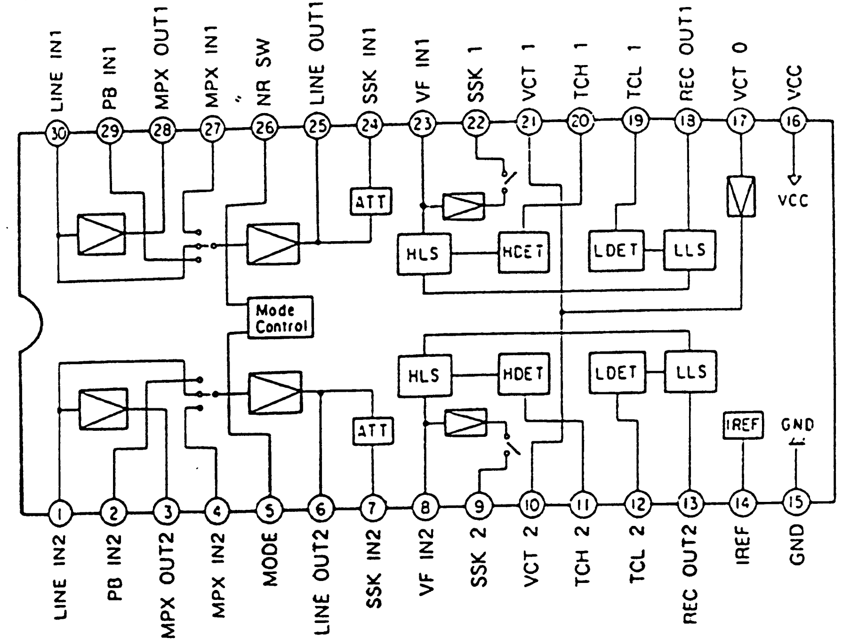

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
[MAIN (B) BOARD]
[MAIN (A)
CNP305
RV201
RV101
T201
T101
D306
D305
D307
D308
D309
Q311
Q317
Q316
Q709
CNP304
8 7 6 5 4 3 2 1
RED
WHT
BLK
BLK
WHT
RED
BLK
WHT
TO TRANSLATION BOARD
CNP708
WHT
(INCLUDING RV301)
CNP303
RED
BLK
WHT
WHT
BLK
RED
1-639-413-
13
14
09

• IC BLOCK DIAGRAM

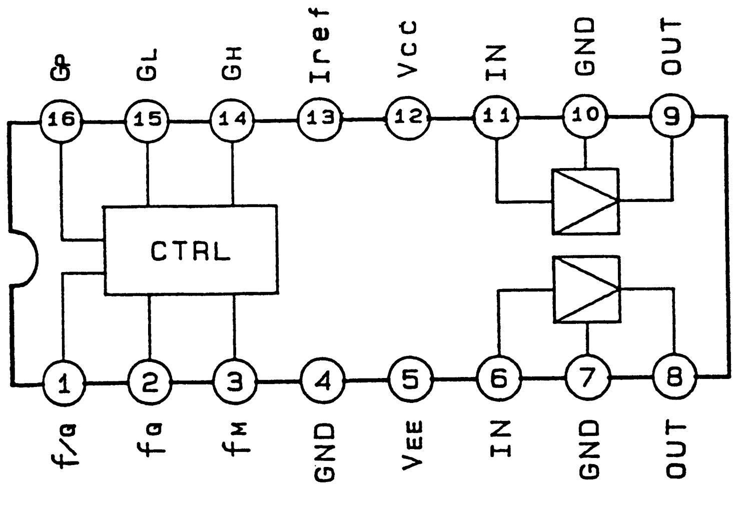
IC703,706 BA6219B
IC704 LB1641


TSD
OCP
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTROL LOGIC
1 GND
2 MOTOR DRIVE
3 NOISE FILTER
4 CLAMP
5 FWD IN
6 REV IN
7 VCC 1
8 VCC 2
9 NOISE FILTER
10 MOTOR DRIVE

IC302 CXA1330S


LINE IN1
PB IN1
MPX OUT1
MPX IN1
NR SW
LINE OUT1
SSK IN1
VF IN1
SSK 1
VCT 1
TCH 1
TCL 1
REC OUT1
VCT 0
VCC
ATT
HLS
HDET
LDET
LLS
VCC
Mode Control
IREF
GND
LINE IN2
PB IN2
MPX OUT2
MPX IN2
MODE
LINE OUT2
SSK IN2
VF IN2
SSK 2
VCT 2
TCH 2
TCL 2
REC OUT2
IREF
GND

IC303 CXA1198AP


Gp
GL
GH
Iref
Vcc
IN
GND
OUT
CTRL
f/Q
fQ
fM
GND
VEE
IN
GND
OUT

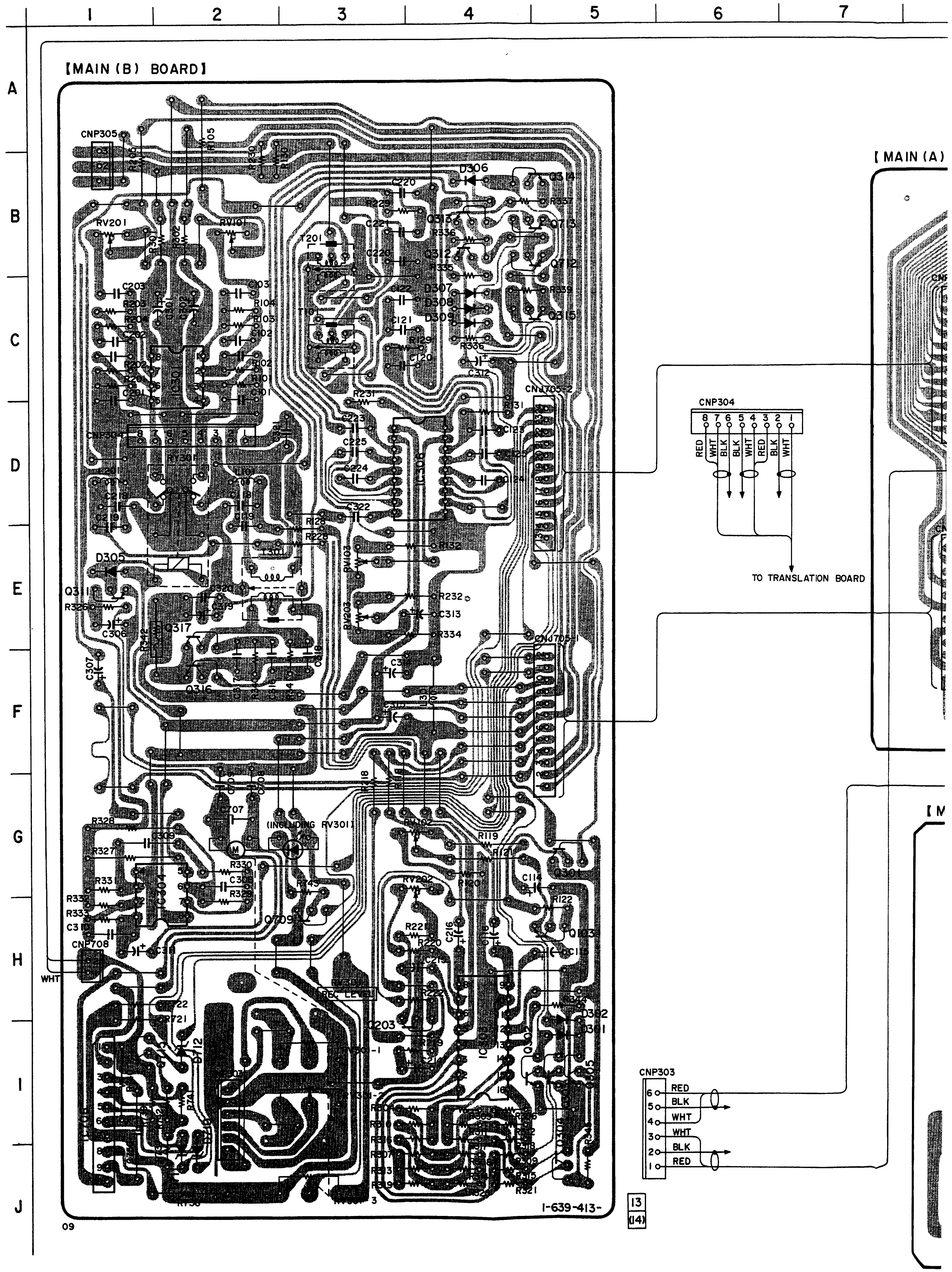
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C-12	Q301	G-5
D201	C-13	Q302	I-5
D301	I-5	Q303	I-5
D302	I-5	Q304	J-5
D303	E-11	Q305	I-5
D304	E-11	Q306	D-11
D305	E-1	Q307	E-11
D306	B-4	Q308	F-11
D307	C-4	Q309	E-11
D308	C-4	Q310	E-11
D309	C-4	Q311	E-1
D601	A-20	Q312	B-4
D701	C-17	Q313	B-4
D702	C-17	Q314	B-5
D703	E-12	Q315	C-5
D704	E-12	Q316	F-2
D705	F-12	Q317	E-2
D706	F-12	Q318	F-11
D707	E-14	Q701	F-13
D708	E-14	Q702	F-13
D709	E-13	Q703	E-13
D710	J-2	Q704	D-17
D711	J-2	Q705	C-17
D712	I-2	Q706	C-15
D713	C-15	Q707	C-17
D714	C-17	Q708	B-19
D720	C-10	Q709	H-3
D721	C-11	Q712	B-5
D722	C-12	Q713	B-5
D750	B-13	Q715	I-1
D751	D-14	Q720	I-8
D752	B-19	Q721	J-8
D753	A-19	Q801	B-13
D754	I-8	Q802	B-11
D801	D-16		
D802	C-15		
D803	C-15		
D804	C-14		
D805	C-14		
IC301	C-2		
IC302	E-9		
IC303	I-4		
IC304	H-2		
IC305	D-13		
IC306	D-4		
IC701	E-16		
IC702	B-15		
IC703	E-13		
IC704	D-13		
IC705	D-15		
IC706	I-1		
IC1001	H-18		
IC1002	H-19		
Q101	D-10		
Q102	D-11		
Q103	H-5		
Q201	F-10		
Q202	D-11		
Q203	I-4		

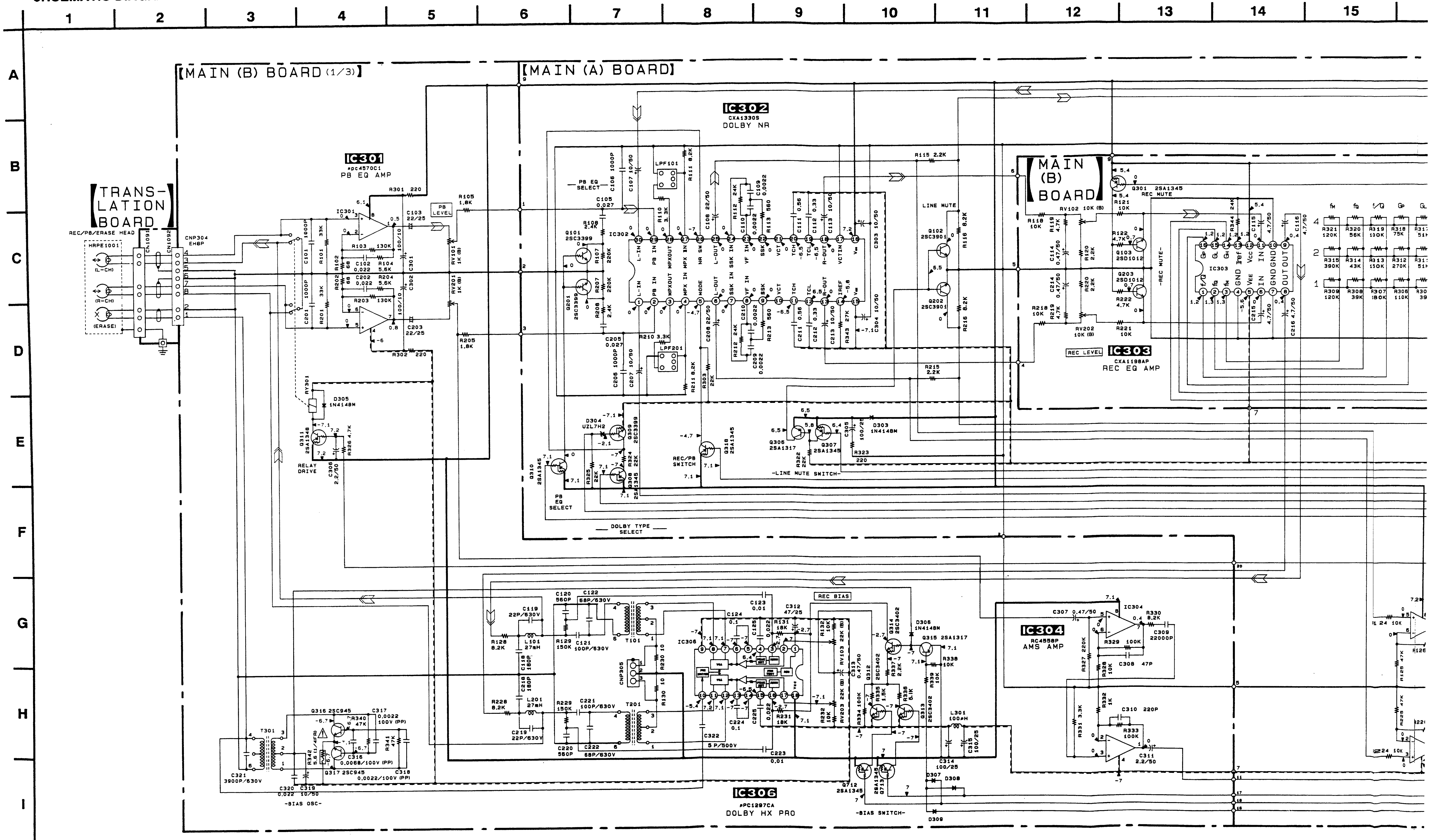
Note on Mounting Diagram:

- ○—— : parts extracted from the component side.
- ▪ : parts mounted on the couductor side.

PRINTED WIRING BOADS — MAIN SECTION —


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
[MAIN (B) BOARD]
[MAIN (A)
CNP305
RV201
RV101
T201
T101
D306
D305
Q311
Q317
Q316
IC306
CNJ705-2
CNJ705-1
CNP304
8 7 6 5 4 3 2 1
RED WHT BLK BLK WHT RED BLK WHT
TO TRANSLATION BOARD
(INCLUDING RV301)
RV202
CNP708
WHT
Q709
Q203
CNP303
6 RED
5 BLK
4 WHT
3 WHT
2 BLK
1 RED
1-639-413-
09
13
(14)

SHCEMATIC DIAGRAM — MAIN SECTION —



1
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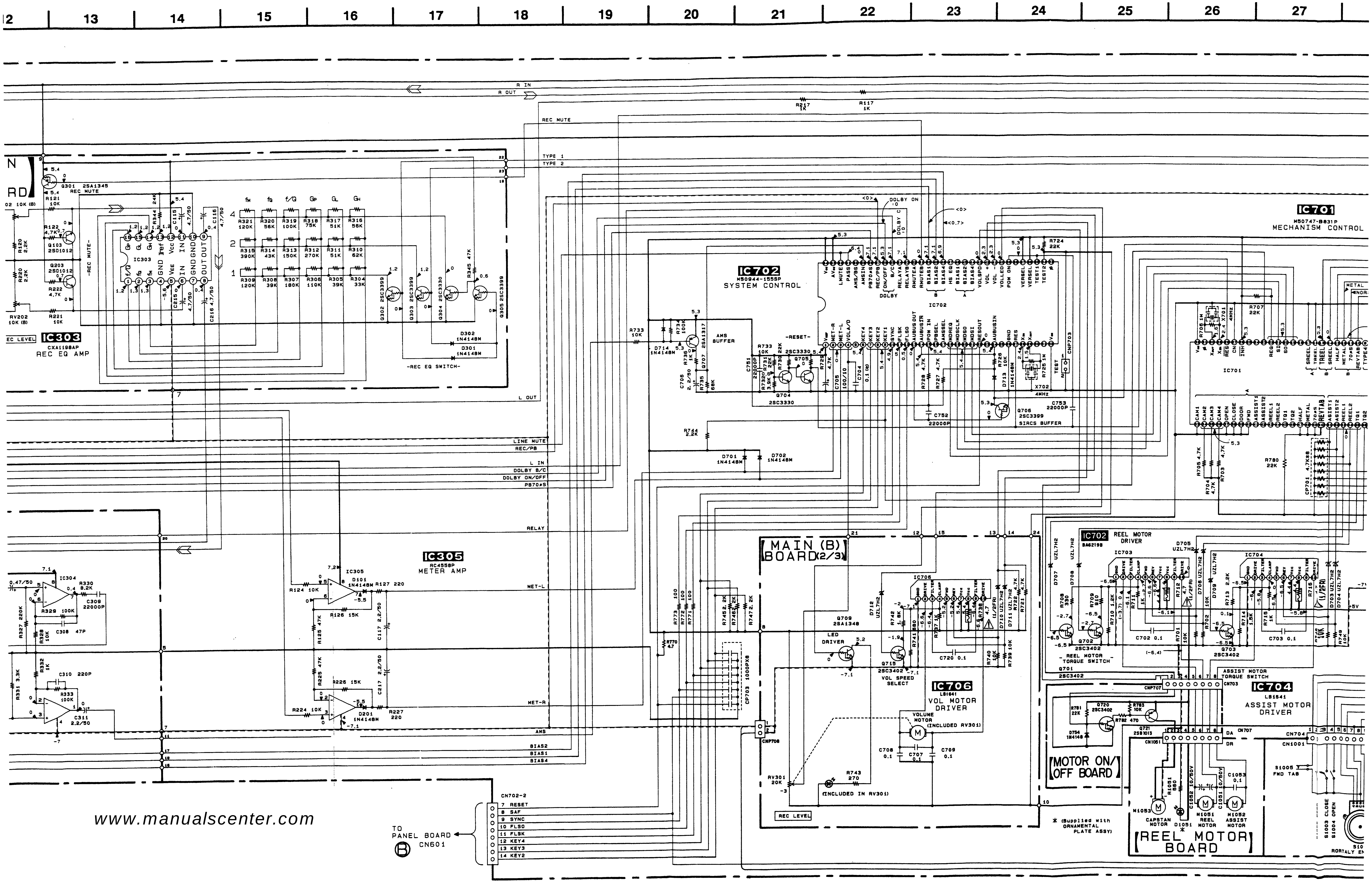
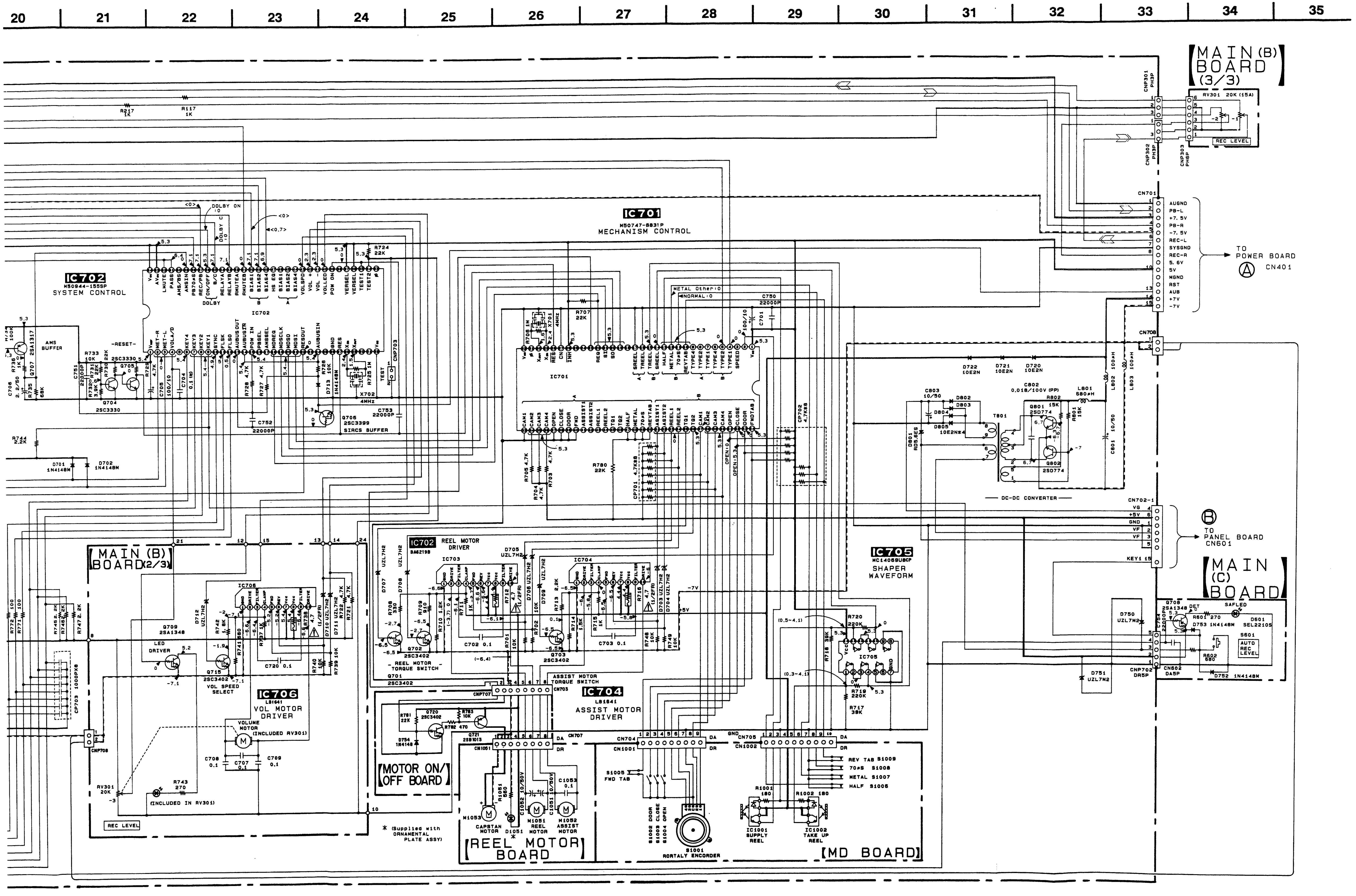
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
MAIN (B) BOARD (1/3)
MAIN (A) BOARD
TRANS-LATION BOARD
REC/PB/ERASE HEAD
HRPE1001
(L-CH)
(R-CH)
(ERASE)
CN1091
CN1092
CNP304 EHBP
IC301
μPC4570C1
PB EQ AMP
PB LEVEL
RV101 1K (B)
RV201 1K (B)
IC302
CXA1330S
DOLBY NR
LPF101
LPF201
PB EQ SELECT
LINE MUTE
MAIN (B) BOARD
Q301 2SA1345
REC MUTE
IC303
CXA1198AP
REC EQ AMP
REC LEVEL
RV102 10K (B)
RV202 10K (B)
-REC MUTE-
RY301
D305 1N4148M
RELAY DRIVE
D304 UZL7H2
REC/PB SWITCH
-LINE MUTE SWITCH-
DOLBY TYPE SELECT
REC BIAS
IC304
RC4558P
AMS AMP
IC306
μPC1297CA
DOLBY HX PRO
T101
T201
T301
CNP305
-BIAS OSC-
-BIAS SWITCH-
L301 100μH

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ⏦ : fusible resistor.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.


12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
R IN
R OUT
REC MUTE
TYPE 1
TYPE 2
L OUT
LINE MUTE
REC/PB
L IN
DOLBY B/C
DOLBY ON/OFF
PB70#S
RELAY
MET-L
MET-R
AMS
BIAS2
BIAS1
BIAS4
Q301 2SA1345 REC MUTE
Q103 2SD1012
Q203 2SD1012
RV202 10K (B)
REC LEVEL
IC303
CXA1198AP
REC EQ AMP
-REC MUTE-
fH
fB
f/Q
GP
GL
GH
Q302 2SC3399
Q303 2SC3399
Q304 2SC3330
Q305 2SC3399
D302 1N4148M
D301 1N4148M
-REC EQ SWITCH-
IC304
IC305
RC4558P
METER AMP
D101 1N4148M
D201 1N4148M
IC702
M50944-155SP
SYSTEM CONTROL
AMS BUFFER
Q707 2SA1317
D714 1N4148M
-RESET-
Q705 2SC3330
Q704 2SC3330
D701 1N4148M
D702 1N4148M
DOLBY ON
DOLBY
Q706 2SC3399
SIRCS BUFFER
X702 4MHZ
CNP703
TEST
IC701
M50747-B831P
MECHANISM CONTROL
X701 4MHZ
CP701 4.7K×8
METAL
MAIN (B) BOARD (2/3)
IC706
LB1641
VOL MOTOR DRIVER
LED DRIVER
Q709 2SA1348
Q715 2SC3402
VOL SPEED SELECT
VOLUME MOTOR (INCLUDED RV301)
RV301 20K
(INCLUDED IN RV301)
REC LEVEL
CP703 1000P×8
CNP708
CN702-2
7 RESET
8 SAF
9 SYNC
10 FLSO
11 FLSK
12 KEY4
13 KEY3
14 KEY2
TO PANEL BOARD
B CN601
IC702
BA6219B
REEL MOTOR DRIVER
IC703
IC704
D705 UZL7H2
Q702 2SC3402
Q703 2SC3402
-REEL MOTOR TORQUE SWITCH
Q701 2SC3402
ASSIST MOTOR TORQUE SWITCH
CNP707
CN703
IC704
LB1641
ASSIST MOTOR DRIVER
Q720 2SC3402
Q721 2SB1013
D754 1N4148
CN707
CN1051
CN704
CN1001
MOTOR ON/OFF BOARD
M1053 CAPSTAN MOTOR
D1051
M1051 REEL MOTOR
M1052 ASSIST MOTOR
* (Supplied with ORNAMENTAL PLATE ASSY)
REEL MOTOR BOARD
S1005 FWD TAB
S1003 CLOSE
S1004 OPEN
ROTALY EN


20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
MAIN (B) BOARD (3/3)
CNP301 PH3P
RV301 20K (15A)
REC LEVEL
CNP302 PH3P
CNP303 PH5P
R217 1K
R117 1K
IC701
M50747-8831P
MECHANISM CONTROL
IC702
M50944-155SP
SYSTEM CONTROL
DOLBY ON
DOLBY
CN701
AUGND
PB-L
+7.5V
PB-R
-7.5V
REC-L
SYSGND
REC-R
5.6V
5V
MGND
RST
AUB
+7V
-7V
TO POWER BOARD
Ⓐ CN401
CN708
AMS BUFFER
Q707 2SA1317
-RESET-
Q704 2SC3330
Q705 2SC3330
Q706 2SC3399
SIRCS BUFFER
X702 4MHz
X701 4MHz
C753 22000P
C752 22000P
C750 22000P
R707 22K
R724 22K
METAL Other:0
NORMAL:0
CP702 4.7K×8
CP701 4.7K×8
R780 22K
D701 1N4148M
D702 1N4148M
R744 2.2K
D722 10E2N
D721 10E2N
D720 10E2N
C803 10/50
D802
D803
D804
D805 10E2N×4
C802 0.018/100V (PP)
R802
L801 680μH
L802 100μH
L803 100μH
T801
Q801 2SD774
Q802 2SD774
R801 15K
D801 RD5.6EB
C801 10/50
DC-DC CONVERTER
CN702-1
VG
+5V
GND
VF
VF
KEY1
Ⓑ TO PANEL BOARD CN601
MAIN (B) BOARD (2/3)
IC702 REEL MOTOR DRIVER
BA6219B
IC703
IC704
D705 UZL7H2
IC705
MC14069UBCP
SHAPER WAVEFORM
MAIN (C) BOARD
Q708 2SA1348
DET
SAFLED
D601 SEL2210S
S601 AUTO REC LEVEL
R601 270
D753 1N4148M
R602 680
D750 UZL7H2
D751 UZL7H2
D752 1N4148M
CNP702 DR5P
CN602 DA5P
R720 220K
R718 39K
R719 220K
R717 39K
IC706
LB1641
Q709 2SA1348
LED DRIVER
Q715 2SC3402
VOL SPEED SELECT
IC706 LB1641 VOL MOTOR DRIVER
VOLUME MOTOR (INCLUDED RV301)
C708 0.1
C707 0.1
C709 0.1
RV301 20K
R743 270
(INCLUDED IN RV301)
REC LEVEL
CNP708
CP703 1000P×8
R772 100
R771 100
R746 2.2K
R747 2.2K
Q702 2SC3402
REEL MOTOR TORQUE SWITCH
Q701 2SC3402
Q703 2SC3402
ASSIST MOTOR TORQUE SWITCH
C702 0.1
C703 0.1
C720 0.1
IC704 LB1641 ASSIST MOTOR DRIVER
CNP707
CN703
Q720 2SC3402
Q721 2SB1013
R781 22K
R783 10K
R782 470
D754 1N4148
MOTOR ON/OFF BOARD
CN707
CN1051
M1053 CAPSTAN MOTOR
M1051 REEL MOTOR
M1052 ASSIST MOTOR
C1052 10/50V
C1051 10/50V
C1053 0.1
R1051 560
D1051
* (Supplied with ORNAMENTAL PLATE ASSY)
REEL MOTOR BOARD
CN704
CN1001
S1005 FWD TAB
S1002 DOOR
S1003 CLOSE
S1004 OPEN
S1001 RORTALY ENCODER
CN705
CN1002
REV TAB S1009
70μS S1008
METAL S1007
HALF S1006
R1001 180
R1002 180
IC1001 SUPPLY REEL
IC1002 TAKE UP REEL
MD BOARD

Continued from page 4.

Ref. No.	Part No.	Description				Remark
R306	1-247-880-11	CARBON	110K	5%	1/4W	
R307	1-247-885-00	CARBON	180K	5%	1/4W	
R308	1-249-436-11	CARBON	39K	5%	1/4W	
R309	1-247-881-00	CARBON	120K	5%	1/4W	
R310	1-247-874-11	CARBON	62K	5%	1/4W	
R311	1-247-872-11	CARBON	51K	5%	1/4W	
R312	1-247-889-00	CARBON	270K	5%	1/4W	
R313	1-247-883-00	CARBON	150K	5%	1/4W	
R314	1-247-870-11	CARBON	43K	5%	1/4W	
R315	1-247-893-11	CARBON	390K	5%	1/4W	
R316	1-249-438-11	CARBON	56K	5%	1/4W	
R317	1-247-872-11	CARBON	51K	5%	1/4W	
R318	1-247-876-11	CARBON	75K	5%	1/4W	
R319	1-249-441-11	CARBON	100K	5%	1/4W	
R320	1-249-438-11	CARBON	56K	5%	1/4W	
R321	1-247-881-00	CARBON	120K	5%	1/4W	
R322	1-249-433-11	CARBON	22K	5%	1/4W	
R323	1-249-409-11	CARBON	220	5%	1/4W	F
R324	1-249-433-11	CARBON	22K	5%	1/4W	
R325	1-249-433-11	CARBON	22K	5%	1/4W	
R326	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R327	1-247-887-00	CARBON	220K	5%	1/4W	
R328	1-249-429-11	CARBON	10K	5%	1/4W	
R329	1-249-441-11	CARBON	100K	5%	1/4W	
R330	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R331	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R332	1-249-417-11	CARBON	1K	5%	1/4W	F
R333	1-249-441-11	CARBON	100K	5%	1/4W	
R334	1-249-441-11	CARBON	100K	5%	1/4W	
R335	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R336	1-247-848-11	CARBON	5.1K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R338	1-249-429-11	CARBON	10K	5%	1/4W	
R339	1-249-429-11	CARBON	10K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R342	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R343	1-215-455-00	METAL	27K	1%	1/6W	
R344	1-247-864-11	CARBON	24K	5%	1/4W	
R345	1-249-437-11	CARBON	47K	5%	1/4W	
R601	1-249-410-11	CARBON	270	5%	1/4W	F
R602	1-249-415-11	CARBON	680	5%	1/4W	F
R701	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R703	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R704	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R706	1-247-903-00	CARBON	1M	5%	1/4W	
R707	1-249-433-11	CARBON	22K	5%	1/4W	
R708	1-249-411-11	CARBON	330	5%	1/4W	
R709	1-247-830-11	CARBON	910	5%	1/4W	
R710	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R711	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R712	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R713	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R714	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R715	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R716	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R717	1-249-436-11	CARBON	39K	5%	1/4W	
R718	1-249-436-11	CARBON	39K	5%	1/4W	
R719	1-247-887-00	CARBON	220K	5%	1/4W	
R720	1-247-887-00	CARBON	220K	5%	1/4W	
R721	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R722	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R724	1-249-433-11	CARBON	22K	5%	1/4W	
R725	1-247-903-00	CARBON	1M	5%	1/4W	
R726	1-249-429-11	CARBON	10K	5%	1/4W	
R727	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R728	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R729	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R730	1-249-433-11	CARBON	22K	5%	1/4W	
R731	1-249-433-11	CARBON	22K	5%	1/4W	
R732	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-441-11	CARBON	100K	5%	1/4W	
R735	1-249-439-11	CARBON	68K	5%	1/4W	
R736	1-249-417-11	CARBON	1K	5%	1/4W	F
R737	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R738	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R739	1-249-429-11	CARBON	10K	5%	1/4W	
R740	1-249-429-11	CARBON	10K	5%	1/4W	
R741	1-249-415-11	CARBON	680	5%	1/4W	F
R742	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R743	1-249-410-11	CARBON	270	5%	1/4W	F
R744	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R745	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R747	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R748	1-249-429-11	CARBON	10K	5%	1/4W	
R749	1-249-429-11	CARBON	10K	5%	1/4W	
R770	1-249-389-11	CARBON	4.7	5%	1/4W	F
R771	1-247-807-31	CARBON	100	5%	1/4W	
R772	1-247-807-31	CARBON	100	5%	1/4W	
R773	1-247-807-31	CARBON	100	5%	1/4W	
R780	1-249-433-11	CARBON	22K	5%	1/4W	
R781	1-249-433-11	CARBON	22K	5%	1/4W	
R782	1-249-413-11	CARBON	470	5%	1/4W	F
R783	1-249-429-11	CARBON	10K	5%	1/4W	
R801	1-249-431-11	CARBON	15K	5%	1/4W	
R802	1-249-431-11	CARBON	15K	5%	1/4W	

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV101	1-238-597-11	RES, ADJ, CARBON 1K	
RV102	1-238-600-11	RES, ADJ, CARBON 10K	
RV103	1-238-601-11	RES, ADJ, CARBON 22K	
RV201	1-238-597-11	RES, ADJ, CARBON 1K	
RV202	1-238-600-11	RES, ADJ, CARBON 10K	
RV203	1-238-601-11	RES, ADJ, CARBON 22K	
RV301	1-241-232-11	RES, VAR, CARBON 20K/20K/20K (REC LEVEL)	
		< RELAY >	
RY301	1-515-726-11	RELAY	
		< SWITCH >	
S601	1-554-303-21	SWITCH, TACTILE (AUTO REC LEVEL)	
S605	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	
		< TRANSFORMER >	
T101	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T201	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T301	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T801	1-450-673-11	TRANSFORMER, DC-DC CONVERTER	
		< VIBRATOR >	
X701	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X702	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

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*	1-632-741-11	REEL MOTOR BOARD ****************			
		< CAPACITOR >			
C1051	1-124-907-11	ELECT	10uF	20%	50V
C1052	1-124-907-11	ELECT	10uF	20%	50V
C1053	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN1051	1-564-501-11	PIN, CONNECTOR 8P			
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
		< RESISTOR >			
R1051	1-247-825-31	CARBON	560	5%	1/4W

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Continued from page 4.

Ref. No.	Part No.	Description				Remark
R306	1-247-880-11	CARBON	110K	5%	1/4W	
R307	1-247-885-00	CARBON	180K	5%	1/4W	
R308	1-249-436-11	CARBON	39K	5%	1/4W	
R309	1-247-881-00	CARBON	120K	5%	1/4W	
R310	1-247-874-11	CARBON	62K	5%	1/4W	
R311	1-247-872-11	CARBON	51K	5%	1/4W	
R312	1-247-889-00	CARBON	270K	5%	1/4W	
R313	1-247-883-00	CARBON	150K	5%	1/4W	
R314	1-247-870-11	CARBON	43K	5%	1/4W	
R315	1-247-893-11	CARBON	390K	5%	1/4W	
R316	1-249-438-11	CARBON	56K	5%	1/4W	
R317	1-247-872-11	CARBON	51K	5%	1/4W	
R318	1-247-876-11	CARBON	75K	5%	1/4W	
R319	1-249-441-11	CARBON	100K	5%	1/4W	
R320	1-249-438-11	CARBON	56K	5%	1/4W	
R321	1-247-881-00	CARBON	120K	5%	1/4W	
R322	1-249-433-11	CARBON	22K	5%	1/4W	
R323	1-249-409-11	CARBON	220	5%	1/4W	F
R324	1-249-433-11	CARBON	22K	5%	1/4W	
R325	1-249-433-11	CARBON	22K	5%	1/4W	
R326	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R327	1-247-887-00	CARBON	220K	5%	1/4W	
R328	1-249-429-11	CARBON	10K	5%	1/4W	
R329	1-249-441-11	CARBON	100K	5%	1/4W	
R330	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R331	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R332	1-249-417-11	CARBON	1K	5%	1/4W	F
R333	1-249-441-11	CARBON	100K	5%	1/4W	
R334	1-249-441-11	CARBON	100K	5%	1/4W	
R335	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R336	1-247-848-11	CARBON	5.1K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R338	1-249-429-11	CARBON	10K	5%	1/4W	
R339	1-249-429-11	CARBON	10K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R342	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R343	1-215-455-00	METAL	27K	1%	1/6W	
R344	1-247-864-11	CARBON	24K	5%	1/4W	
R345	1-249-437-11	CARBON	47K	5%	1/4W	
R601	1-249-410-11	CARBON	270	5%	1/4W	F
R602	1-249-415-11	CARBON	680	5%	1/4W	F
R701	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R703	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R704	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R706	1-247-903-00	CARBON	1M	5%	1/4W	
R707	1-249-433-11	CARBON	22K	5%	1/4W	
R708	1-249-411-11	CARBON	330	5%	1/4W	
R709	1-247-830-11	CARBON	910	5%	1/4W	
R710	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R711	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R712	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R713	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R714	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R715	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R716	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R717	1-249-436-11	CARBON	39K	5%	1/4W	
R718	1-249-436-11	CARBON	39K	5%	1/4W	
R719	1-247-887-00	CARBON	220K	5%	1/4W	
R720	1-247-887-00	CARBON	220K	5%	1/4W	
R721	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R722	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R724	1-249-433-11	CARBON	22K	5%	1/4W	
R725	1-247-903-00	CARBON	1M	5%	1/4W	
R726	1-249-429-11	CARBON	10K	5%	1/4W	
R727	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R728	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R729	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R730	1-249-433-11	CARBON	22K	5%	1/4W	
R731	1-249-433-11	CARBON	22K	5%	1/4W	
R732	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-441-11	CARBON	100K	5%	1/4W	
R735	1-249-439-11	CARBON	68K	5%	1/4W	
R736	1-249-417-11	CARBON	1K	5%	1/4W	F
R737	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R738	1-212-950-00	FUSIBLE	4.7	5%	1/2W	F
R739	1-249-429-11	CARBON	10K	5%	1/4W	
R740	1-249-429-11	CARBON	10K	5%	1/4W	
R741	1-249-415-11	CARBON	680	5%	1/4W	F
R742	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R743	1-249-410-11	CARBON	270	5%	1/4W	F
R744	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R745	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R747	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R748	1-249-429-11	CARBON	10K	5%	1/4W	
R749	1-249-429-11	CARBON	10K	5%	1/4W	
R770	1-249-389-11	CARBON	4.7	5%	1/4W	F
R771	1-247-807-31	CARBON	100	5%	1/4W	
R772	1-247-807-31	CARBON	100	5%	1/4W	
R773	1-247-807-31	CARBON	100	5%	1/4W	
R780	1-249-433-11	CARBON	22K	5%	1/4W	
R781	1-249-433-11	CARBON	22K	5%	1/4W	
R782	1-249-413-11	CARBON	470	5%	1/4W	F
R783	1-249-429-11	CARBON	10K	5%	1/4W	
R801	1-249-431-11	CARBON	15K	5%	1/4W	
R802	1-249-431-11	CARBON	15K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV101	1-238-597-11	RES, ADJ, CARBON 1K	
RV102	1-238-600-11	RES, ADJ, CARBON 10K	
RV103	1-238-601-11	RES, ADJ, CARBON 22K	
RV201	1-238-597-11	RES, ADJ, CARBON 1K	
RV202	1-238-600-11	RES, ADJ, CARBON 10K	
RV203	1-238-601-11	RES, ADJ, CARBON 22K	
RV301	1-241-232-11	RES, VAR, CARBON 20K/20K/20K (REC LEVEL)	

< RELAY >

Ref. No.	Part No.	Description	Remark
RY301	1-515-726-11	RELAY	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S601	1-554-303-21	SWITCH, TACTILE (AUTO REC LEVEL)	
S605	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	

< TRANSFORMER >

Ref. No.	Part No.	Description	Remark
T101	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T201	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
T301	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T801	1-450-673-11	TRANSFORMER, DC-DC CONVERTER	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X701	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X702	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

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* 1-632-741-11 REEL MOTOR BOARD

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< CAPACITOR >

Ref. No.	Part No.	Description			
C1051	1-124-907-11	ELECT	10uF	20%	50V
C1052	1-124-907-11	ELECT	10uF	20%	50V
C1053	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

Ref. No.	Part No.	Description
CN1051	1-564-501-11	PIN, CONNECTOR 8P
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P

< RESISTOR >

Ref. No.	Part No.	Description			
R1051	1-247-825-31	CARBON	560	5%	1/4W

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17,18 leer

TC-H6600

SERVICE MANUAL

AEP Model
UK Model

This unit is the cassette deck for the MHC-6600 component system.

Model Name Using Similar Mechanism		TC-WR620/WR720
Tape Transport Mechanism Type	DECK A	TCM-190RA13A
	DECK B	TCM-190RB12A

SPECIFICATIONS

Recoding system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF) 40 – 13,000 Hz (±3 dB) using TYPE I cassette (Sony HF-S) 40 – 14,000 Hz (±3 dB), using TYPE II cassette 40 – 15,000 Hz (±3 dB) using TYPE IV cassette
Wow and flutter	0.1% WRMS ±0.3% (DIN)
Inputs	PHONO (phono jacks): sensitivity 5 mV impedance 47 kohms VIDEO (phono jacks) sensitivity 300 mV impedance 47 kohms

Design and specification subject to change without notice.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ᗡD are trademarks of Dolby Laboratories Licensing Corporation.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MICROFILM

MC-Service

STEREO CASSETTE DECK

SONY®

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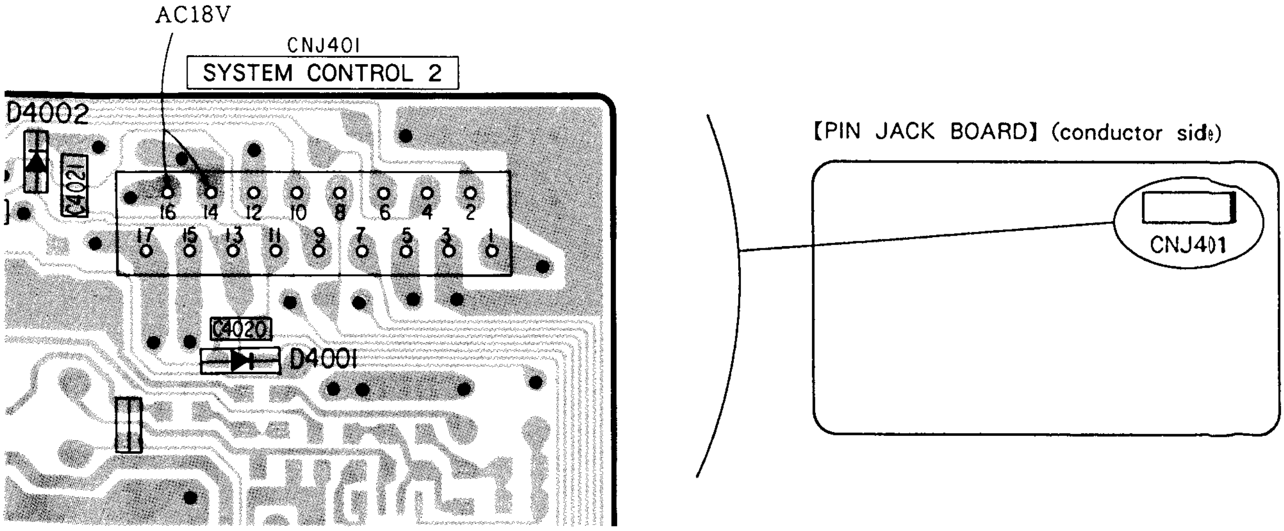
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Caution when repairing

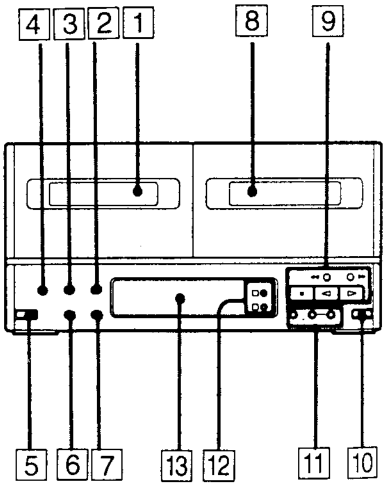
Normally the power of this set is supplied from the TA-H6600 amplifier connected. When only this set is repaired, connect the power of 18V AC as shown in the figure below.


AC18V
CNJ401
SYSTEM CONTROL 2
D4002
C4021
16 14 12 10 8 6 4 2
17 15 13 11 9 7 5 3 1
C4020
D4001
[PIN JACK BOARD] (conductor side)
CNJ401

SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATION AND FUNCTION OF CONTROLS



1 Cassette holder (Deck A)

2 COUNTER RESET button
Resets the counter of the cassette deck to "0".

3 CD SYNCHRO (CD synchronized recording) button and indicator (110) (116)

4 DUBBING MODE button and indicator (98)

5 ≜ EJECT button (Deck A)

6 DOLBY NR (Dolby Noise Reduction) button (64)

7 DIRECTION MODE button (62) (70)

8 Cassette holder (Deck B)

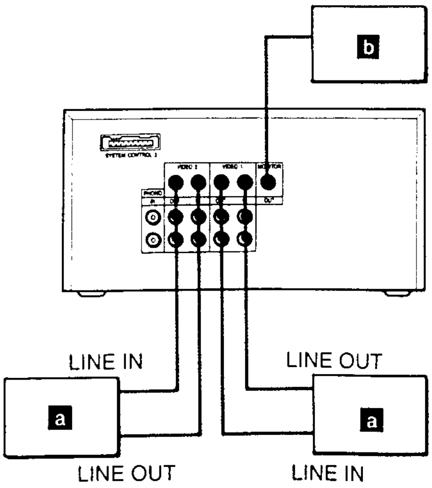
9 Tape operation buttons (for Deck A and B)
◀◀ ▶▶ : Fast winding
■ : Stop
▷ : Forward play
◁ : Reverse play

10 ≜ EJECT button (Deck B)

11 Tape operation buttons (for Deck B)
: PAUSE
: MUTE (Muting)
● : REC (recording)

12 DECK A/B selection buttons (64)

13 Display window

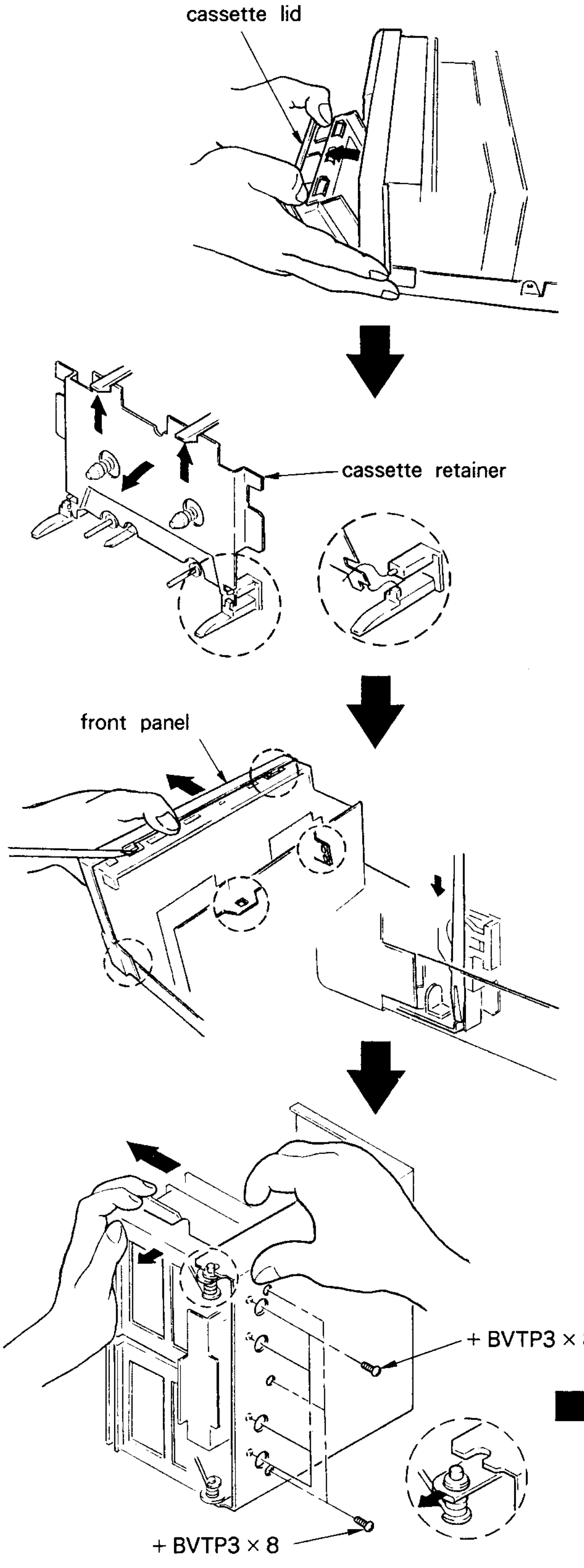


You can connect a VCR **a** to the VIDEO 1 or VIDEO 2 jacks. You can also connect a monitor TV **b** to MONITOR OUT. (TV with MONITOR IN jacks only.) To select VCR, press the VIDEO FUNCTION selector and light up the VIDEO 1 or VIDEO 2 indicator.

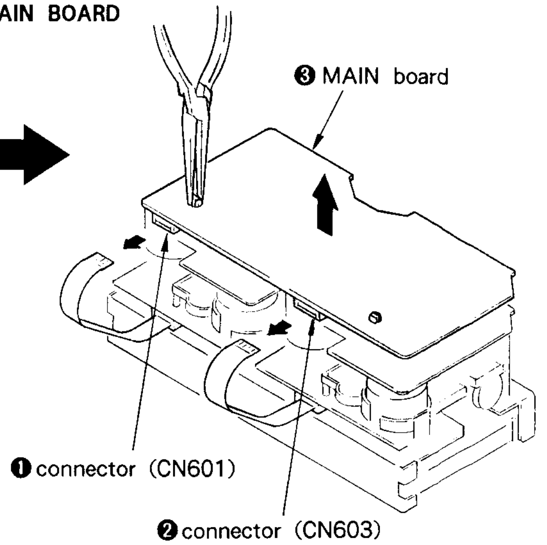
SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

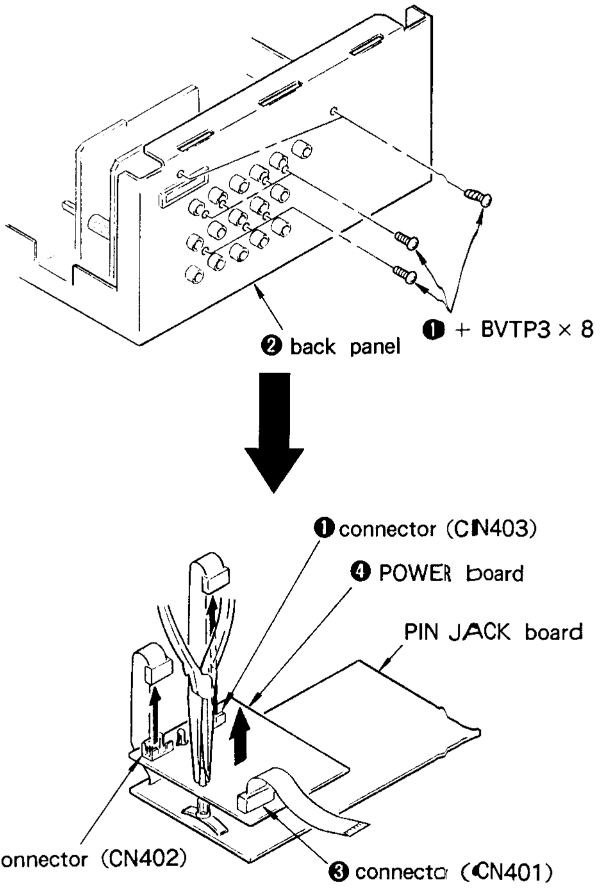
- **FRONT PANEL**


cassette lid
cassette retainer
front panel
+ BVTP3 × 8
+ BVTP3 × 8

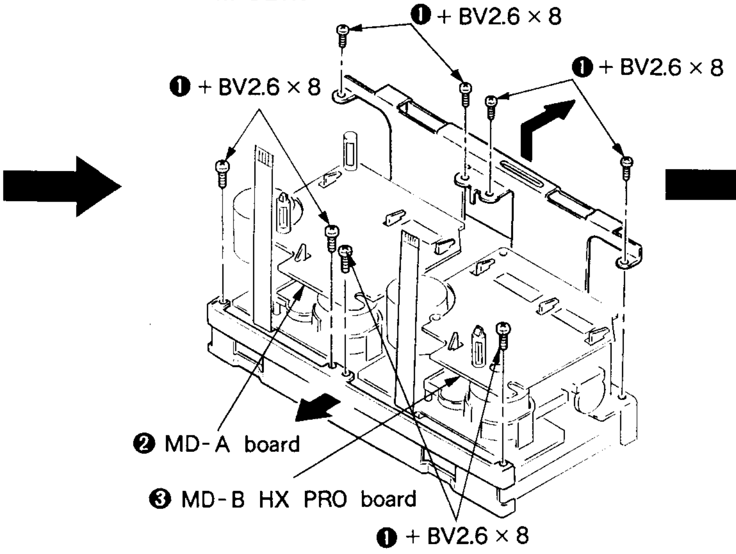
- **MAIN BOARD**


❸ MAIN board
❶ connector (CN601)
❷ connector (CN603)

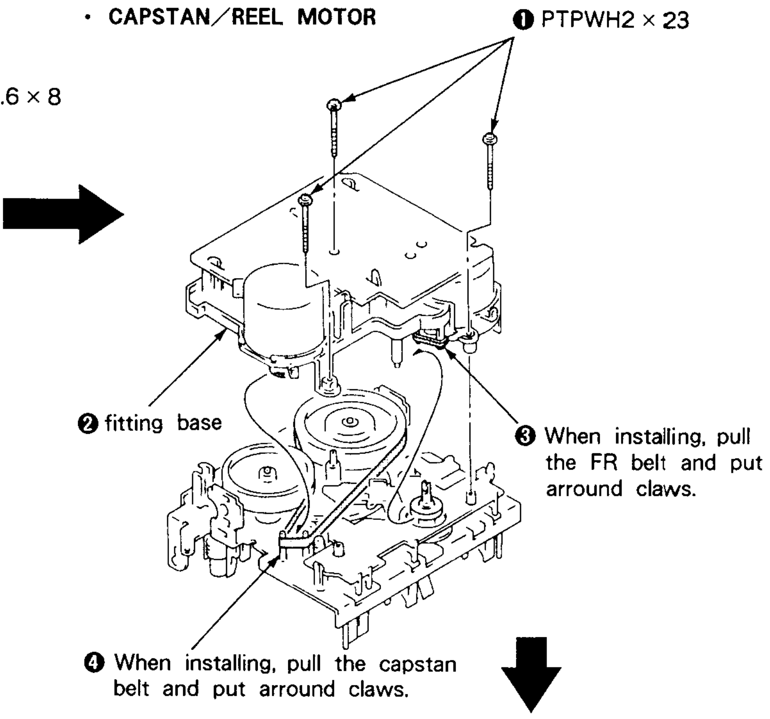
- **PIN JACK/POWER BOARD**

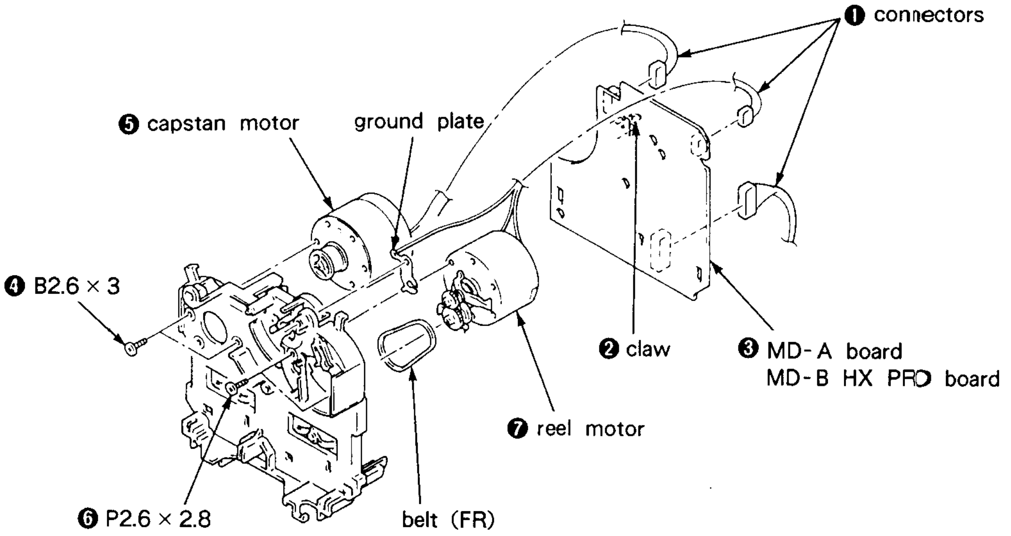

❷ back panel
❶ + BVTP3 × 8
❶ connector (CN403)
❹ POWER board
PIN JACK board
❷ connector (CN402)
❸ connector (CN401)

· MECHANISM DECK

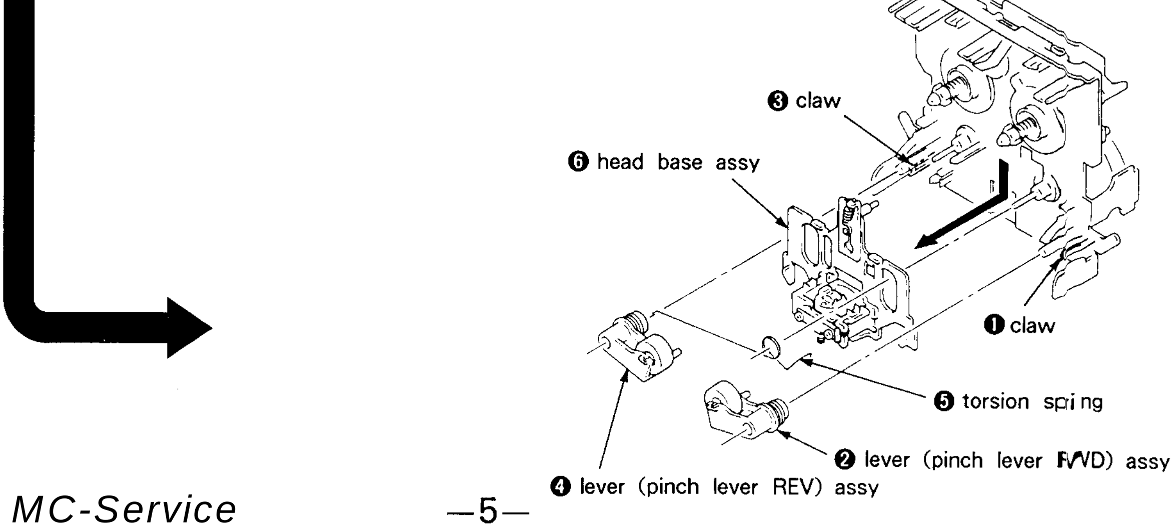

❶ + BV2.6 × 8
❶ + BV2.6 × 8
❶ + BV2.6 × 8
❷ MD-A board
❸ MD-B HX PRO board
❶ + BV2.6 × 8

· CAPSTAN/REEL MOTOR


❶ PTPWH2 × 23
❷ fitting base
❸ When installing, pull the FR belt and put arround claws.
❹ When installing, pull the capstan belt and put arround claws.


❶ connectors
❺ capstan motor
ground plate
❹ B2.6 × 3
❷ claw
❸ MD-A board
MD-B HX PRO board
❼ reel motor
❻ P2.6 × 2.8
belt (FR)

· HEAD, PINCH ROLLER


❸ claw
❻ head base assy
❶ claw
❺ torsion spring
❷ lever (pinch lever FWD) assy
❹ lever (pinch lever REV) assy

SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

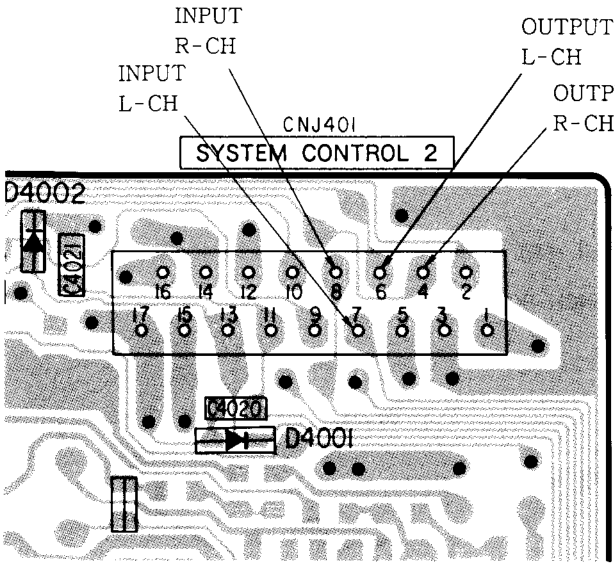
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	35 to 60g•cm (0.49 to 0.83 oz•inch)
Forward back tension	CQ-102C	2 to 6g • cm (0.03 to 0.08oz • inch)
Reverse	CQ-102RC	35 to 60g • cm (0.49 to 0.83oz • inch)
Reverse back tension	CQ-102RC	2 to 6g • cm (0.03 to 0.08oz • inch)
Forward, Reverse	CQ-201B	70 to 110g•cm (0.98 to 1.52 oz•inch)

LINE IN/OUT Terminal (CNJ401)


INPUT R-CH
INPUT L-CH
OUTPUT L-CH
OUTPUT R-CH
CNJ401
SYSTEM CONTROL 2
D4002
C4021
16 14 12 10 8 6 4 2
17 15 13 11 9 7 5 3 1
C4020
D4001

SECTION 4
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.

- Switch position
  DOLBY NR switch : OFF
  DIR MODE switch : ⇄

Test Tape

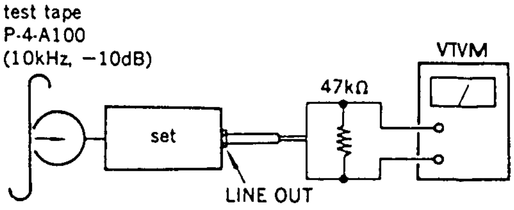
Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

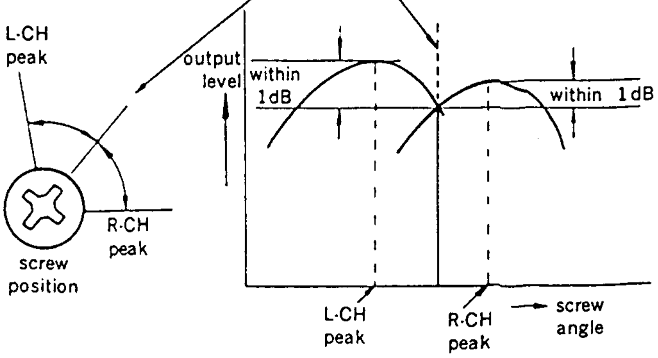
DECK A **DECK B**

Procedure:

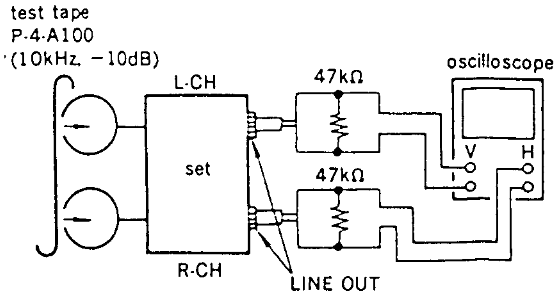
1. Forward Playback Mode

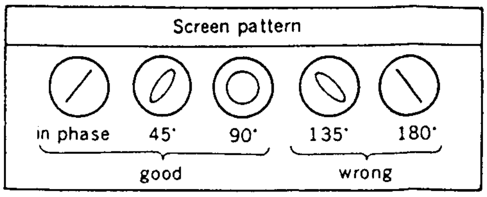

test tape
P-4-A100
(10kHz, −10dB)
VTVM
47kΩ
set
LINE OUT

2. Turn the adjustment screw for the maximum output levels. If these levels do notmatch, turn the adjustment screw until both of output levels match together within 1dB.


L-CH peak
output level
within 1dB
within 1dB
R-CH peak
screw position
L-CH peak
R-CH peak
screw angle

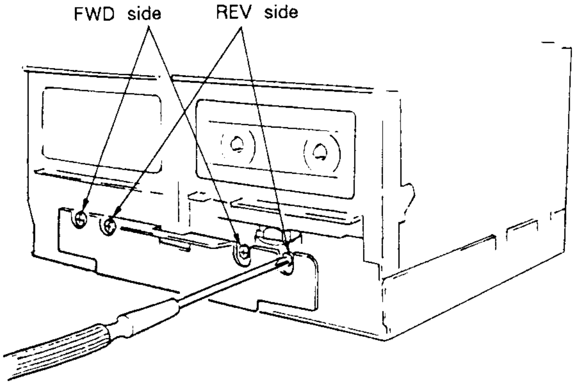
3. Playback Mode


test tape
P-4-A100
(10kHz, −10dB)
L-CH
R-CH
set
47kΩ
47kΩ
oscilloscope
V
H
LINE OUT


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

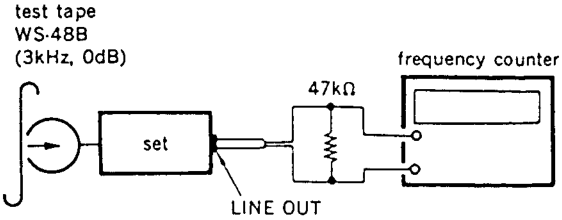
Adjustment Location : – record/playback head –


FWD side
REV side

Tape Speed Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—


test tape
WS-48B
(3kHz, 0dB)
set
47kΩ
frequency counter
LINE OUT

Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

1. Short TP601 (main board) when the power is OFF.
2. Turn on the power and put the deck A into the FWD mode.
3. Connect a resistor of 150 Ω to both the terminals of TP6001 (main board). (The set enters into high speed playback mode.)
4. Adjust RV72A (H) of the deck A so that a reading of the frequency counter meets the adjustment value.
5. Put the deck iA nto the STOP mode and remove the resister of 150 Ω
6. Adjust the deck B performing items 2 through 5 as deck A.
7. After the adjustment is completed, remove the short of TP601.

(Normal speed adjustment)

1. Put the set into the FWD playback mode.
2. At this time, adjust RV71A (L) of the deck A and RV71B (L) of the deck B so that a reading of the frequency counter meets the adjustment value.

Adjustment Limits :

Speed	Frequency Counter Reading
High	6,000 ± 20Hz
Normal	3,000 ± 10Hz

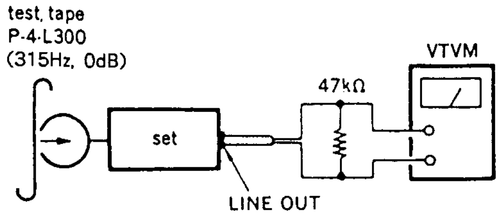
Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

Adjustment Location : MD-A board
MD-B HX PRO board

Playback Level Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—


test. tape
P-4-L300
(315Hz, 0dB)
VTVM
47kΩ
set
LINE OUT

Adjust deck A : RV11A (L-CH), RV21A R-CH) and deck B : RV11B (L-CH), RV21B (R-CH) so that the VTVM reading becomes the adjustment limits below.

Adjustment Limits :

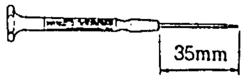
LINE OUT level : − 10 ± 0.5dB (0.23 to 0.26V)

Level Difference between Channels : within 0.5dB

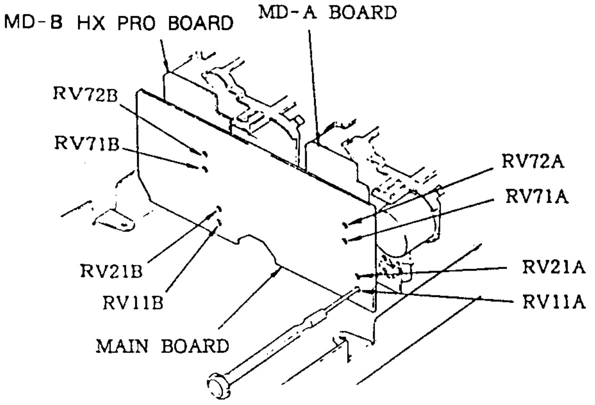
Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD-A board
MD-B HX PRO board

Tape Speed/playback Level Adjustment


Screwdriver to adjust the MD block
35mm

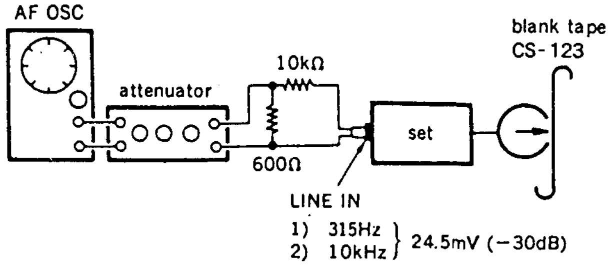
The MD block adjustment can be performed by inserting a screwdriver of which axis length (not including the shaft) is 35 mm or more through the rear side of the main board.


MD-B HX PRO BOARD
MD-A BOARD
RV72B
RV71B
RV72A
RV71A
RV21B
RV11B
RV21A
RV11A
MAIN BOARD

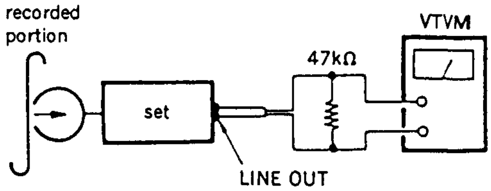
Record Bias Adjustment DECK B

Procedure :

1. Record Mode


AF OSC
blank tape
CS-123
10kΩ
attenuator
set
600Ω
LINE IN
1) 315Hz
2) 10kHz
24.5mV (−30dB)

2. Playback Mode


recorded
portion
VTVM
47kΩ
set
LINE OUT

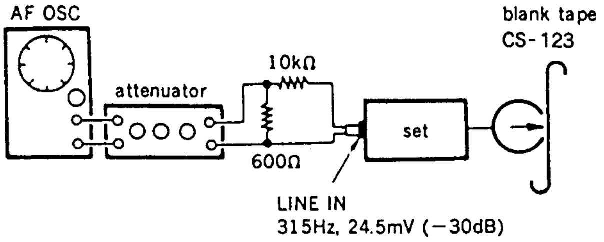
Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

Adjustment Location : MD-B HX PRO board

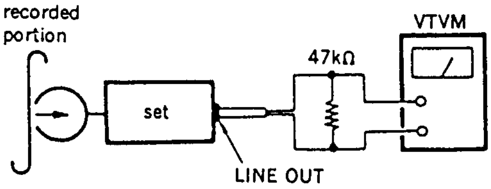
Record Level Adjustment **DECK B**

Procedure:

1. Record Mode


AF OSC
blank tape
CS-123
10kΩ
attenuator
600Ω
set
LINE IN
315Hz, 24.5mV (−30dB)

2. Playback Mode


recorded
portion
VTVM
47kΩ
set
LINE OUT

Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat steps 1 and 2.

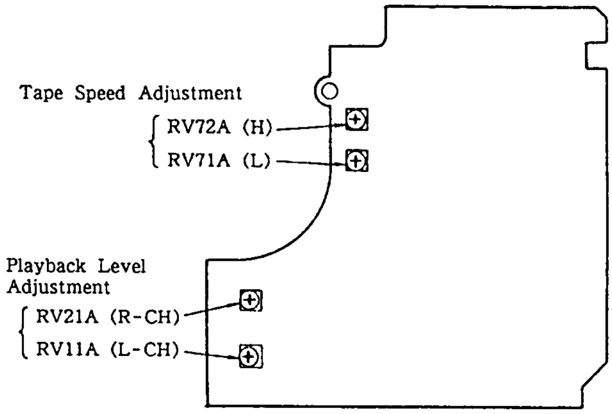
Adjustment Limits:

LINE OUT level: −30 ± 0.5dB (23 to 26mV)

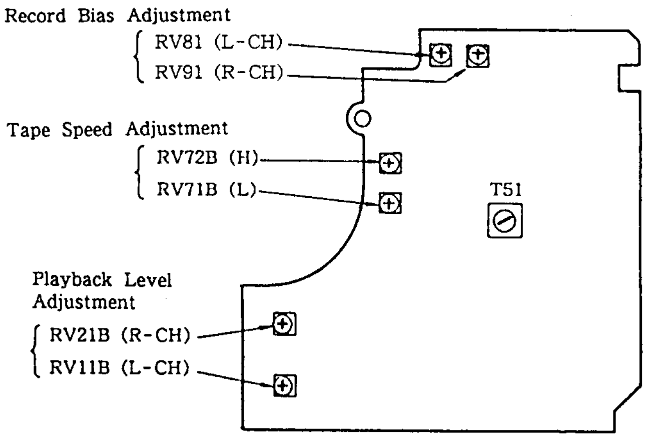
Adjustment Location: main board

ADJUSTMENT LOCATION:

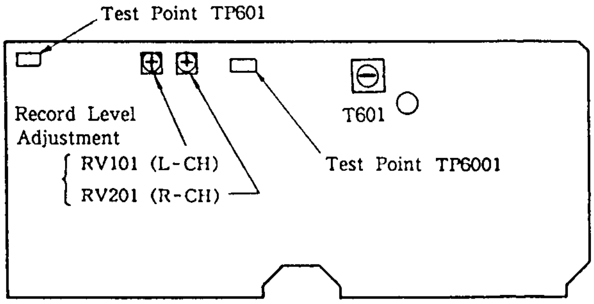
【MD-A BOARD】 component side


Tape Speed Adjustment
RV72A (H)
RV71A (L)
Playback Level
Adjustment
RV21A (R-CH)
RV11A (L-CH)

【MD-B HX PRO BOARD】 component side


Record Bias Adjustment
RV81 (L-CH)
RV91 (R-CH)
Tape Speed Adjustment
RV72B (H)
RV71B (L)
T51
Playback Level
Adjustment
RV21B (R-CH)
RV11B (L-CH)

【MAIN BOARD】 component side


Test Point TP601
Record Level
Adjustment
RV101 (L-CH)
RV201 (R-CH)
T601
Test Point TP6001

SECTION 5
DIAGRAMS

5-1. IC PIN DESCRIPTION

IC351 display microprocessor HD614023-FA93

Fluorescent lamp indicator is activated by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1~11	S10-S0	O	FL indicator tube(FL351) segment output
12			Not used. (+5.6 V)
13	VDISP	—	Power supply for activating the FL indicator tube(-20V)
14~15			Not used(GND)
16	SYNC	I	Interrupt input. Data transmission from IC601(system controller) is checked.
17	INT	I	Not used. (GND)
18~25		I	Not used. (GND)
26	Vcc	—	Power supply terminal (+5.6V)
27	CLK	I	Data transmission clock input from IC601 (system controller)
28	DATA	I	Serial data input from IC601 (system controller)
29	SYNC	I	Sync signal input which indicates the first byte of data sent from IC601 (system controller)
30~32			Not used. (GND)
33	HIGH DUB	O	LED (D301) light output in the high speed dubbing mode.
34	NORM DUB	O	LED (D301) light output in the normal speed dubbing mode.
35	CD SYNC	O	LED (D302) light output in the CD sync mode.
36~38			Not used. (GND)
39	FLCHECK	I	All the FL indicator tubes are lit when this port is set to "L". (Normally +5.6V)
40~42			Not used. (GND)
43	RESET	I	Reset input from IC601 (system controller). "L": Reset.
44	TEST	I	Not used. (+5.6V)
45	OSC1	I	Clock input (4.19MHz)
46	OSC2	O	Clock output
47	GND	—	Power supply terminal (GND)
48~50			Not used. (GND)
51			Not used. (Pull-up)
52~57	G0 - G6	O	FL indicator tube (FL351) grid output
58~61			Not used. (+5.6V)
62~64	S11 - S13	O	FL indicator tube (FL351) segment output

IC406 selector controller M50760-315FP

AV output is switched with the audio bus signal sent from the amplifier (TA-H6600).

Pin No.	Pin Name	I/O	Description
1	D3	I	Model selection input port. Connected to GND.
2	A0	O	Audio IN switch (IC403 and IC404) control output port.
3			Not used.
4	A1	O	Audio IN switch (IC403 and IC404) control output port.
5	CNVss	—	Power supply terminal (GND)
6	Vss	—	Power supply terminal (GND)
7	A2	O	Audio IN switch (IC403 and IC404) control output port.
8	B0	O	Audio OUT switch (IC405) control output port.
9	B1	O	Audio OUT switch (IC405) control output port.
10			Not used.
11	V0	O	Video IN/OUT switch (IC407) control output port.
12	V1	O	Video IN/OUT switch (IC407) control output port.
13~14			Not used. (GND)
15			Not used.
16	RESET	I	Reset input. "L": Reset
17	XOUT	O	Clock output.
18	XIN	I	Clock input.
19	S	I	Serial data input (audio bus)
20	D0	I	Serial data input (audio bus)
21	D1	I	Model selection input port. Connected to +5V (pull up).
22			Not used.
23	D2	I	Model selection input port. Connected to GND.
24	V_{DD}	—	Power supply terminal (+5V)

IC601 system controller M50944-121FP

The system is wholly controlled by communication between IC351 (display microprocessor) and IC602 (mechanism controller).

Pin No.	Pin Name	I/O	Description
1	KEY2	I	Not used. (GND)
2	KEY1	I	Not used. (GND)
3	SYNC	O	Sync signal output which indicates the first byte of data sent to IC351 (display microprocessor).
4	FL-SCK	O	Data transmission clock output to IC351 (display microprocessor).
5	FL-SO	O	Serial data output to IC351 (display microprocessor).
6	AU-BUS	O	Audio bus output.
7	AU-BUS	I	Audio bus input (negative edge).
8	POWER-IN	I	Power-off detection input. "L": Power OFF.
9	PB-SELECT	O	Deck A/B switch output in the playback mode. "L": deck B, "H": deck A.
10	AMS-SELECT	O	AMS amplifier input switch output
11	MD-REQ	I	Data request input from IC602 (mechanism controller)
12	MD-SCLK	O	Data transmission clock output to IC602 (mechanism controller)
13	MD-SO	O	Serial data output to IC602 (mechanism controller)
14	MD-SI	I	Serial data input from IC602 (mechanism controller)
15		O	Not used. (GND)
16	RESET (MD)	O	IC602 (mechanism controller) reset signal output.
17	AU-BUS	I	Audio bus input (positive-edge)
18	RESET (DSP)	O	IC351 (display microprocessor) reset signal output.
19	GND	—	Power supply terminal. (GND)
20	RESET	I	System reset input. "L": Reset.
21	X-IN	I	Clock input (4MHz)
22	X-OUT	O	Clock output
23	XC-IN	I	Not used. (GND)
24	XC-OUT	O	Not used. (open)
25	VSS	—	Power supply terminal (GND)
26	N. C.		Not used. (open)
27	TEST	I	Electrical adjustment test mode setting input This set enters into the test mode when the power is on and it is set to "L". *1
28	VAR SELECT	I	Not used. (pull-up)
29	METAL (B)	I	Metal switch (S83) input for deck B. "H": Metal.
30	70 μ (B)	I	Chrome switch (S82) input for deck B. "L": Normal
31	POWER-ON	O	Not used. (open)
32～35			Not used. (GND)
36	70 μ (A)	I	Chrome switch (S83) input for deck A. "L": Normal.
37	AMS IN	I	Signal input from the AMS amplifier. "H": Detected, "L": Not detected.
38	N. C.		Not used. (GND)
39			Not used. (GND)
40	EQ-HIGH	O	REC equalizer characteristic switch output "H": High speed, "L": Normal speed.
41	BIAS FADE	O	Not used. (GND)
42	BIAS (B)	O	Bias ON/OFF switch output. "H": OFF, "L": ON.
43	TYPE Ⅱ (B)	O	Not used. (GND)
44	TYPE I (B)	O	Not used. (GND)
45	R.MUTE (B)	O	REC mute control output. "L": Mute ON, "H": Mute OFF.
46	RELAY (B)	O	Mechanism deck head switch control output. "L": ON.
47	DOLBY B	O	Dolby B/C switch control output. "L": Dolby C, "H": Dolby B.
48	DOLBY ON	O	Dolby ON/OFF switch control output. "L": ON, "H": OFF.
49	REC/PB	O	Dolby amplifier REC/PB swith output. "L": REC, "H": PB.
50		O	Not used. (open)
51	PB 70 μ	O	Playback equalizer characteristic switch output. "H": normal, "L": chrome or metal
52	AMS/BS	O	Not used.
53	PASS	O	PASS amplifier switch output for LINE OUT. "L": PASS amplifier, "H": Through.

Pin No.	Pin Name	I/O	Description
54	LINE-MUTE	O	Line mute control output. "L": MUTE OFF, "H": MUTE ON
55	AVCC	—	Power supply terminal. (+5V)
56	VCC	—	Power supply terminal. (+5V)
57	AVSS	—	Power supply terminal (GND)
58	V.REF	I	Reference voltage input for A/D input port (+5 V)
59	METER (R)	I	Level meter signal input (R-CH)
60	METER (L)	I	Level meter signal input (L-CH)
61	VOL DATA	I	Not used. (GND)
62	KEY5	I	Not used. (GND)
63	KEY4	I	Key input. (analog) *2
64	KEY3	I	Key input. (analog) *2

*1 Test mode
When the power is on and pin ㉗ is set to "L" (TP601 is shortened.), the set enters the electrical adjustment test mode and the followings can be available.

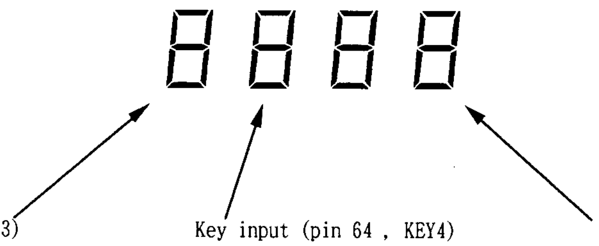
(1) High speed playback
When A or B deck is in the playback mode and a resistor of 150 Ω is connected to both the terminals of TP6001 (main board), the set can be entered the high speed playback mode.

(2) Source monitor
Recording signals can be monitored through the LINE OUT terminal (see page 6) because the line short is removed in recording.

(3) Recording memory
Recording memory is set to ON when the tape counter is reset at the record start point.

(4) Mode display
The counter displays as shown in the A figure when the counter mode is set to the deck A and the deck A button of deck A/B switch is pressed, or when the counter mode is the B deck and the B deck button is pressed.

(5) When this terminal is set back to "H" after it is set to the test mode in "L" of the power-on mode, all the FL indicator tubes are lit.
(The mechanism block continues to operate as before it is set to "H".)



Key input (pin 64 , KEY3)
"0" : DUBBING MODE
"3" : □
"4" : ▷
"5" : ◁
"6" : ▯▯
"7" : REC MUTE
"8" : DIRECTION MODE

Key input (pin 64 , KEY4)
"0" : CD SYNCHRO
"1" : ▷▷
"2" : ◁◁
"3" : ● REC
"4" : LEY COUNTER B
"5" : KEY COUNTER A
"6" : COUNTER RESET
"8" : DOLBY NR

AMS signal
"1": Component is detected.
"0": Component is not detected.

Figure A

*2 Key input (analog port)

Voltage(V) / Input port	0	0.3	0.7	1.2	1.7	2.3	2.8	3.3	4.0
Pin 63, KEY4	CD SYNCHRO	◁◁	▷▷	● REC	KEY COUNTER B	KEY COUNTER A	COUNTER RESET		DOLBY NR
Pin 64, KEY3	DUBBING MODE			□	▷	◁	▯▯ PAUSE	○ REC MUTE	DIRECTION MODE

IC602 mechanism controller M50925-482FP

The mechanism deck is controlled by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1	RESET	I	Reset input from IC601 (system controller). "L": Reset.
2	STOP-A	I	Deck A stop switch (S81) input. "H": Stop.
3	AVSS	—	Power supply terminal (GND)
4	Vref	I	A/D inpout port reference voltage input.
5	A/D. IN-B	I	Deck B leaf switch input (analog). *1
6	A/D. IN-A	I	Deck A leaf switch input (analog). *1
7	AVDD	—	Power supply terminal. (+5V)
8	N. C.		
9	T. REEL-B	I	Not used. (GND)
10	S. REEL-B	I	Deck B supply reel table sensor (IC81)
11	T. REEL-A	I	Not used. (GND)
12	S. REEL-A	I	Deck A supply reel table sensor (IC81)
13~14	N. C.		
15	CM. ON-A	O	Deck A capstan motor (M102) ON/OFF control output. "L": OFF, "H": ON.
16	CM. ON-B	O	Deck B capstan motor (M102) ON/OFF control output. "L": OFF, "H": ON.
17	GND	—	Power supply terminal. (GND)
18	VSS	—	Power supply terminal. (GND)
19	CM. H/L	O	Capstan motor (M102) speed switch output. "H": High speed, "L": Normal.
20	FWD-B	O	Deck B reel motor control output. *2 The reel motor is activated by combining these three outputs.
21	TRIG-B	O	
22	FWD-B	O	
23	RWD-A	O	Deck A reel motor control output. *2 The reel motor is activated by combining these three outputs.
24	TRIG-A	O	
25	FWD-A	O	
26	N. C.		
27	S. REQ	O	Data request output to IC601 (system controller).
28	S. CLK	I	Data transmission clock input from IC601 (system controller).
29	S. OUT	O	Serial data output to IC601 (system controller).
30	S.IN	I	Serial data input from IC601 (system controller).
31~32	N. C.		
33	XOUT	O	Clock output.
34	XIN	I	Clock input.
35	STOP-B	I	Deck B stop switch (S81) input. "H": Stop.
36	VDD	—	Power supply terminal. (+5V)

*1 HALF, REC safety tab leaf switch input

Leaf switch \ Voltage		1	1.9	2.8	3.9	5
Half	S86	ON				OFF
REC safety tab, side A	S84	OFF	ON	OFF	ON	OFF
REC safety tab, side B	S85	ON	ON	OFF	OFF	OFF
		REC available for only side B.	REC available for both sides A	REC inhibit for both sides A and B.	REC available for only side A.	Tape is not set.

Tape is set.

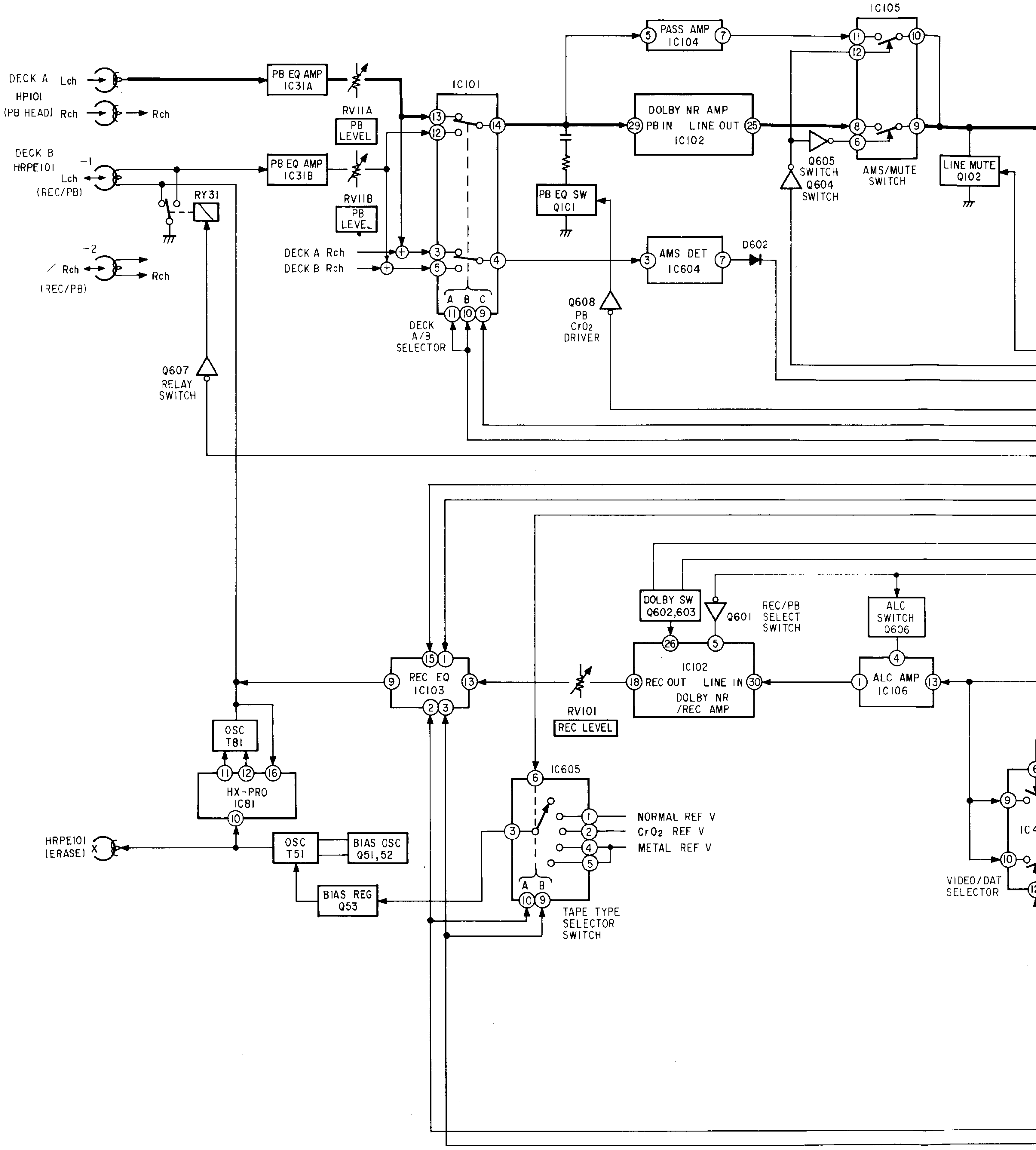
*2 Reel motor drive

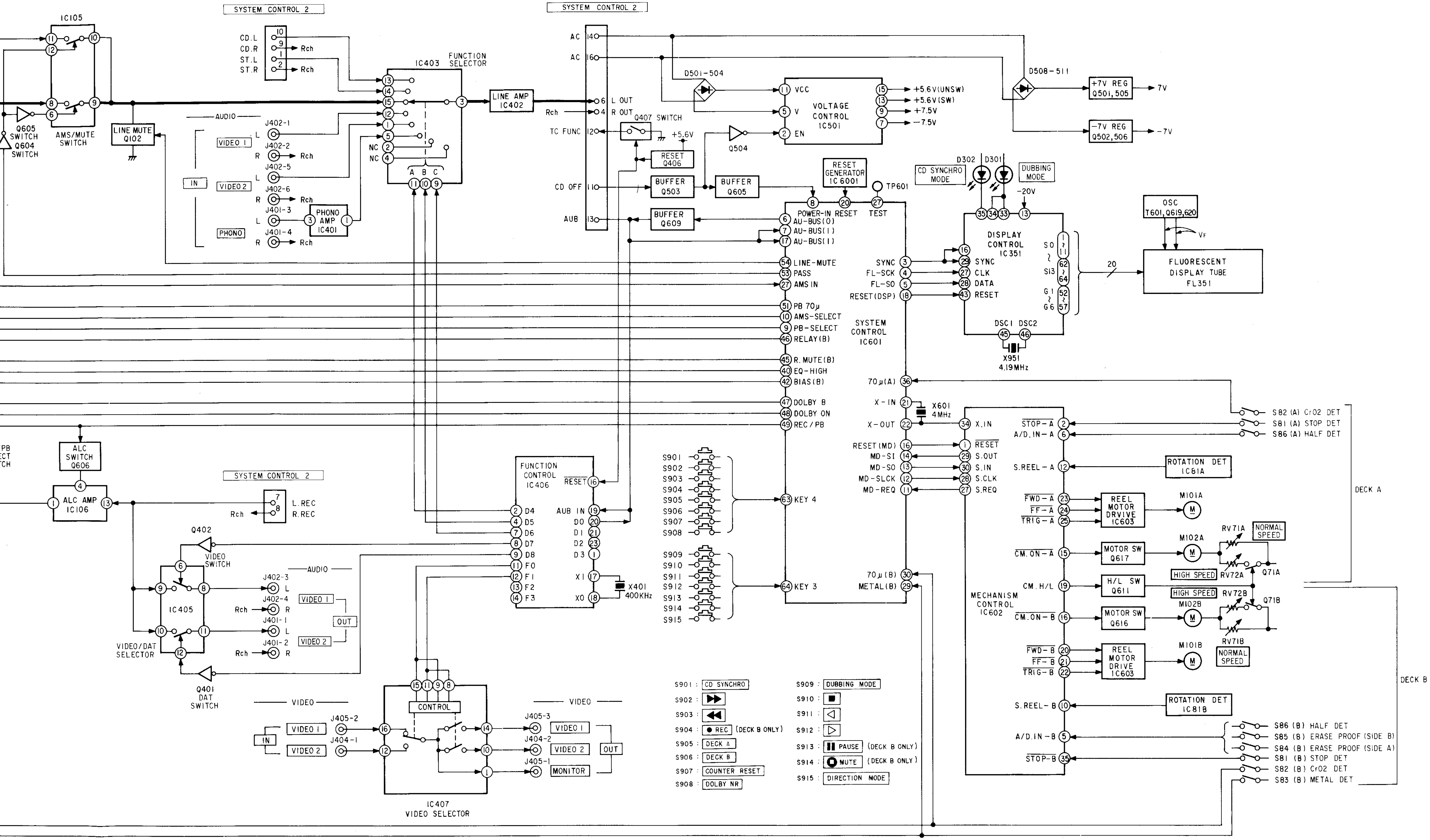
Output port \ Mode		FF	TRIG (kick)	STOP	FWO
Pins ㉑and㉔	FF	L	H	L	L
Pins ㉒and㉕	TRIG	H	L	L	H
Pins ⑳and㉓	FWD	H	H	L	L

Reel motor drive amplifier output voltage

Output	Voltage
TRIG	+ 6V
FF. REW	− 5V
FWD	− 3V

5-2. BLOCK DIAGRAM

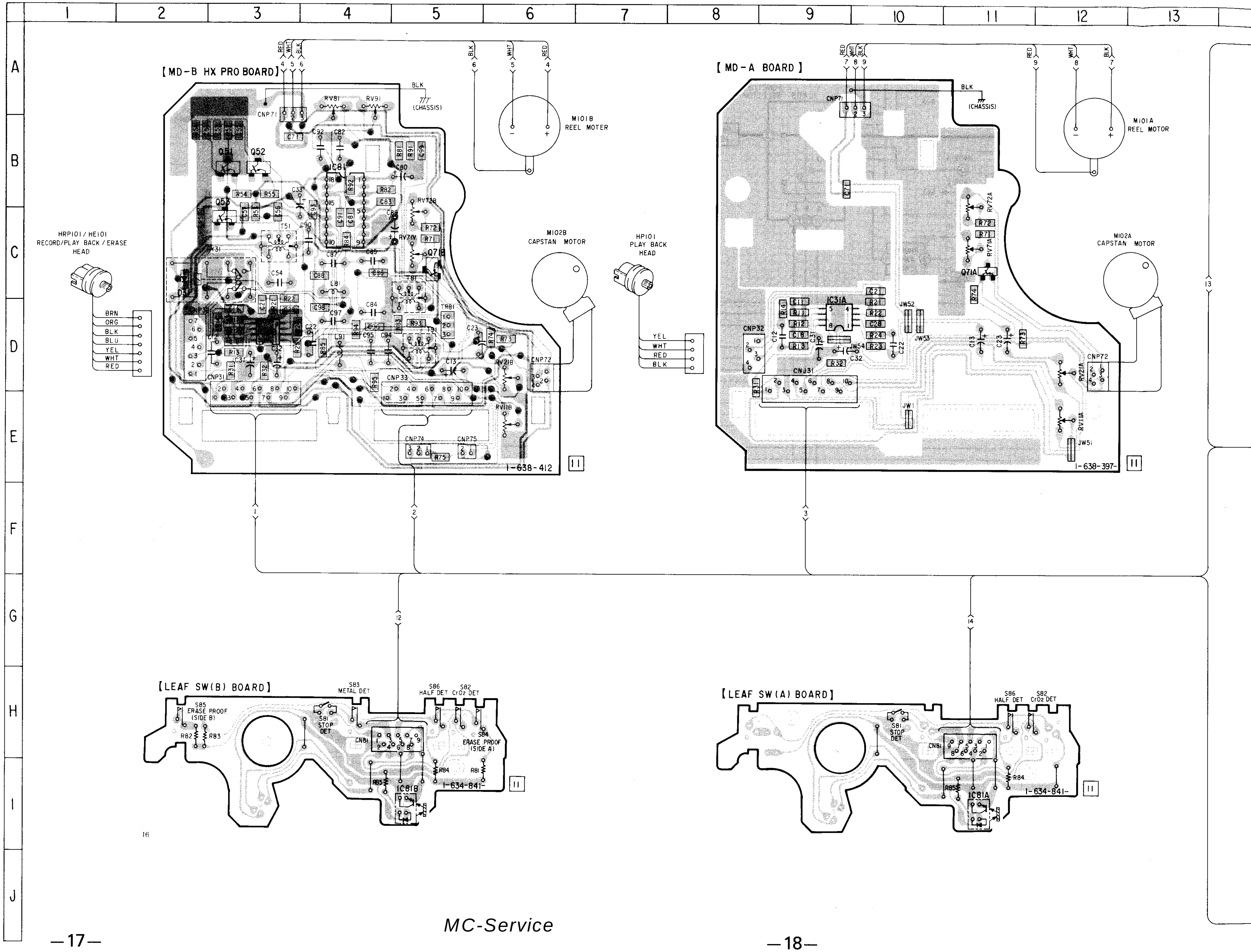

DECK A
HP101
(PB HEAD)
Lch
Rch
Rch
DECK B
HRPE101
-1
Lch
(REC/PB)
-2
Rch
Rch
(REC/PB)
RY31
Q607
RELAY
SWITCH
PB EQ AMP
IC31A
PB EQ AMP
IC31B
RV11A
PB LEVEL
RV11B
PB LEVEL
DECK A Rch
DECK B Rch
IC101
A B C
DECK
A/B
SELECTOR
PB EQ SW
Q101
Q608
PB
CrO2
DRIVER
PASS AMP
IC104
DOLBY NR AMP
PB IN
LINE OUT
IC102
AMS DET
IC604
D602
IC105
Q605
SWITCH
Q604
SWITCH
AMS/MUTE
SWITCH
LINE MUTE
Q102
OSC
T81
HX-PRO
IC81
HRPE101
(ERASE)
OSC
T51
BIAS OSC
Q51,52
BIAS REG
Q53
REC EQ
IC103
RV101
REC LEVEL
IC605
NORMAL REF V
CrO2 REF V
METAL REF V
A B
TAPE TYPE
SELECTOR
SWITCH
DOLBY SW
Q602,603
Q601
REC/PB
SELECT
SWITCH
IC102
REC OUT
LINE IN
DOLBY NR
/REC AMP
ALC
SWITCH
Q606
ALC AMP
IC106
VIDEO/DAT
SELECTOR
IC4


IC105
AMS/MUTE SWITCH
Q605 SWITCH
Q604 SWITCH
LINE MUTE Q102
SYSTEM CONTROL 2
CD.L
CD.R
ST.L
ST.R
Rch
IC403 FUNCTION SELECTOR
LINE AMP IC402
AUDIO
VIDEO 1
VIDEO 2
PHONO
IN
J402-1
J402-2
J402-5
J402-6
J401-3
J401-4
PHONO AMP IC401
NC
A B C
AC
L OUT
R OUT
TC FUNC
CD OFF
AUB
Q407 SWITCH
+5.6V
RESET Q406
BUFFER Q503
BUFFER Q605
BUFFER Q609
D501-504
VOLTAGE CONTROL IC501
VCC
V
EN
Q504
+5.6V(UNSW)
+5.6V(SW)
+7.5V
-7.5V
D508-511
+7V REG Q501,505
-7V REG Q502,506
7V
-7V
RESET GENERATOR IC6001
TP601
POWER-IN RESET
TEST
AU-BUS(0)
AU-BUS(1)
LINE-MUTE
PASS
AMS IN
PB 70μ
AMS-SELECT
PB-SELECT
RELAY(B)
R.MUTE(B)
EQ-HIGH
BIAS(B)
DOLBY B
DOLBY ON
REC/PB
KEY 4
KEY 3
SYSTEM CONTROL IC601
SYNC
FL-SCK
FL-SO
RESET(DSP)
70μ(A)
X-IN
X-OUT
X601 4MHz
RESET(MD)
MD-SI
MD-SO
MD-SLCK
MD-REQ
70μ(B)
METAL(B)
CD SYNCHRO MODE
D302
D301
DUBBING MODE
-20V
DISPLAY CONTROL IC351
SYNC
CLK
DATA
RESET
S0 ~ S13
G1 ~ G6
DSC1 DSC2
X951 4.19MHz
20
OSC T601,Q619,620
Vf
FLUORESCENT DISPLAY TUBE FL351
S82 (A) CrO2 DET
S81 (A) STOP DET
S86 (A) HALF DET
DECK A
MECHANISM CONTROL IC602
X.IN
RESET
S.OUT
S.IN
S.CLK
S.REQ
STOP-A
A/D.IN-A
S.REEL-A
ROTATION DET IC61A
FWD-A
FF-A
TRIG-A
REEL MOTOR DRVIVE IC603
M101A
M102A
CM.ON-A
MOTOR SW Q617
RV71A
NORMAL SPEED
HIGH SPEED
RV72A
Q71A
CM.H/L
H/L SW Q611
RV72B
Q71B
M102B
CM.ON-B
MOTOR SW Q616
FWD-B
FF-B
TRIG-B
REEL MOTOR DRIVE IC603
M101B
RV71B
S.REEL-B
ROTATION DET IC81B
A/D.IN-B
STOP-B
S86 (B) HALF DET
S85 (B) ERASE PROOF (SIDE B)
S84 (B) ERASE PROOF (SIDE A)
S81 (B) STOP DET
S82 (B) CrO2 DET
S83 (B) METAL DET
DECK B
ALC SWITCH Q606
ALC AMP IC106
L.REC
R.REC
Q402 VIDEO SWITCH
IC405
VIDEO/DAT SELECTOR
Q401 DAT SWITCH
J402-3
J402-4
J401-1
J401-2
OUT
FUNCTION CONTROL IC406
RESET
D4 D5 D6 D7 D8
F0 F1 F2 F3
AUB IN
D0 D1 D2 D3
X1 X0
X401 400KHz
S901 – S915
VIDEO
J405-2
J404-1
J405-3
J404-2
J405-1
MONITOR
CONTROL
IC407 VIDEO SELECTOR
S901 : CD SYNCHRO
S902 : ▶▶
S903 : ◀◀
S904 : ● REC (DECK B ONLY)
S905 : DECK A
S906 : DECK B
S907 : COUNTER RESET
S908 : DOLBY NR
S909 : DUBBING MODE
S910 : ■
S911 : ◁
S912 : ▷
S913 : ❚❚ PAUSE (DECK B ONLY)
S914 : ● MUTE (DECK B ONLY)
S915 : DIRECTION MODE

5-3. PRINTED WIRING BOARDS – MAIN SECTION – • See page 34 for Semiconductor Lead Layouts and Circuit Boards Location.

- Semiconductor Location

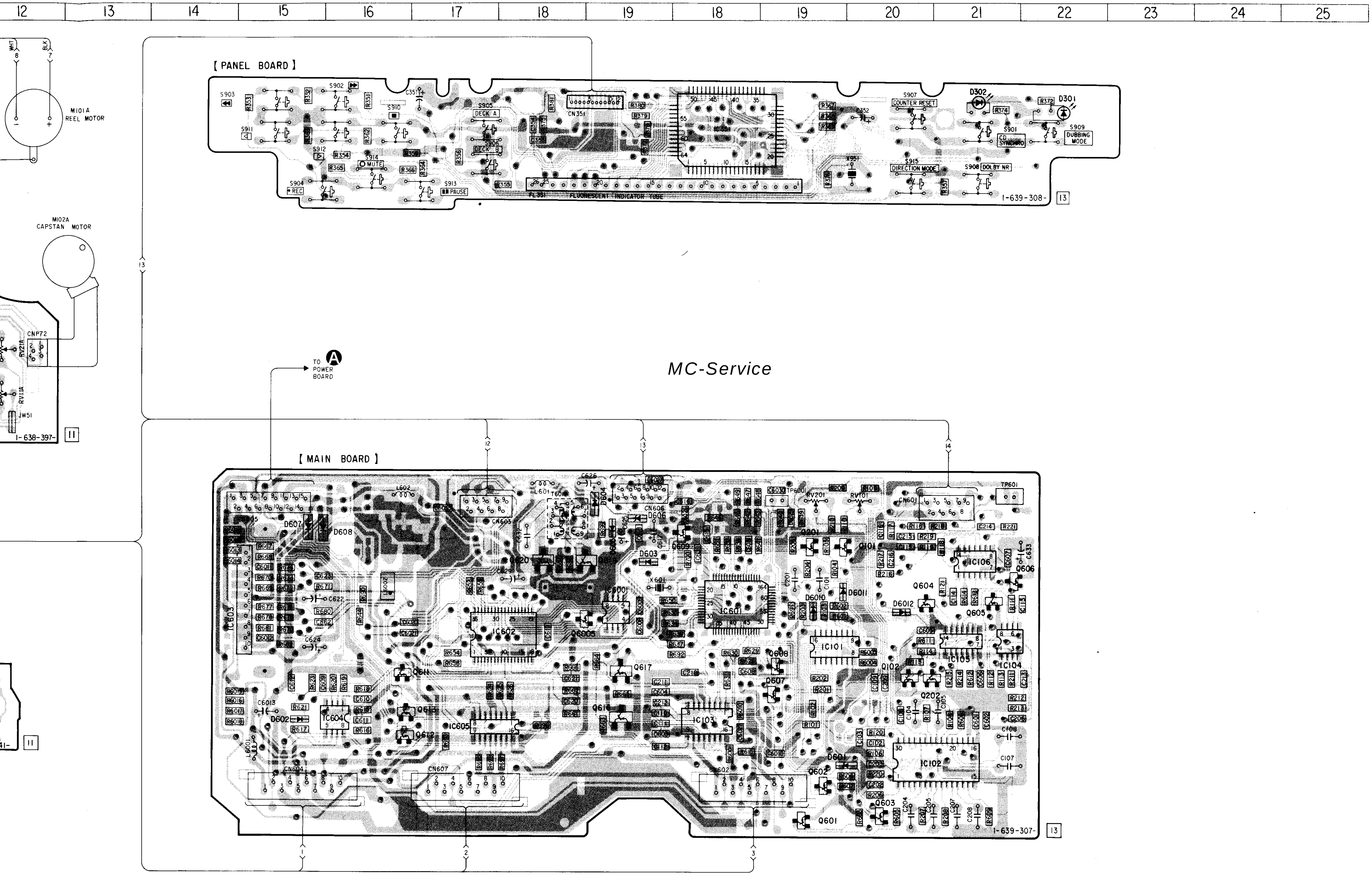
Ref. No.	Location
D31	C-2
D301	B-24
D302	A-23
D601	I-21
D602	I-15
D603	G-19
D604	F-19
D605	F-19
D606	F-19
D607	F-15
D608	F-16
D6010	G-21
D6011	G-21
D6012	G-22
IC31-A	D-9
IC31-B	D-3
IC81	C-4
IC81-A	I-11
IC81-B	I-5
IC101	H-21
IC102	I-23
IC103	I-20
IC104	H-23
IC105	H-23
IC106	G-23
IC351	B-20
IC601	G-20
IC602	H-18
IC603	G-15
IC604	I-16
IC605	I-17
IC6001	G-19
Q51	B-3
Q52	B-3
Q53	C-3
Q71-A	C-11
Q71-B	C-5
Q101	G-21
Q102	H-22
Q201	G-21
Q202	H-22
Q601	J-21
Q602	I-21
Q603	J-22
Q604	G-22
Q605	G-23
Q606	G-23
Q607	H-21
Q608	H-21
Q609	F-20
Q611	H-16
Q612	I-16
Q613	H-16
Q616	I-19
Q617	H-19
Q619	G-19
Q620	G-18
Q6005	G-19


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
[MD-B HX PRO BOARD]
RED
WHT
BLK
4
5
6
BLK
(CHASSIS)
CNP71
RV81
RV91
C71
C92
C82
Q51
Q52
IC81
R81
R91
C99
C80
R54
R55
C33
R82
C83
Q53
R51
R56
RV72B
T51
C90
R72
R71
RV71V
Q71B
RV31
C54
C87
C85
C88
C86
L81
T81
TR81
C84
C93
C97
R93
R94
C96
C95
C94
R83
R85
T91
C23
R74
R73
C22
R13
C31
C32
R32
R23
C13
RV21B
CNP72
CNP31
CNP33
RV11B
CNP74
CNP75
R75
1-638-412
11
HRP101 / HE101
RECORD/PLAY BACK / ERASE HEAD
BRN
ORG
BLK
BLU
YEL
WHT
RED
M101B
REEL MOTER
M102B
CAPSTAN MOTOR
HP101
PLAY BACK HEAD
YEL
WHT
RED
BLK
[MD-A BOARD]
RED
WHT
BLK
7
8
9
BLK
(CHASSIS)
CNP71
C71
M101A
REEL MOTOR
M102A
CAPSTAN MOTOR
RV72A
R72
R71
RV71A
Q71A
R74
IC31A
C11
R11
R12
C18
R13
C21
R21
R22
C28
R24
R23
C12
C13
C23
R73
C31
C32
R32
JW52
JW53
JW54
C22
CNP32
CNJ31
R31
RV21A
CNP72
JW1
RV11A
JW51
1-638-397
11
1
2
3
12
14
[LEAF SW(B) BOARD]
S85
ERASE PROOF (SIDE B)
R82
R83
S83
METAL DET
S81
STOP DET
S86
HALF DET
S82
CrO2 DET
S84
ERASE PROOF (SIDE A)
CN81
R84
R81
R85
IC81B
1-634-841
11
[LEAF SW(A) BOARD]
S81
STOP DET
S86
HALF DET
S82
CrO2 DET
CN81
R84
R85
IC81A
1-634-841
11
13
16

Note on Mounting Diagram:

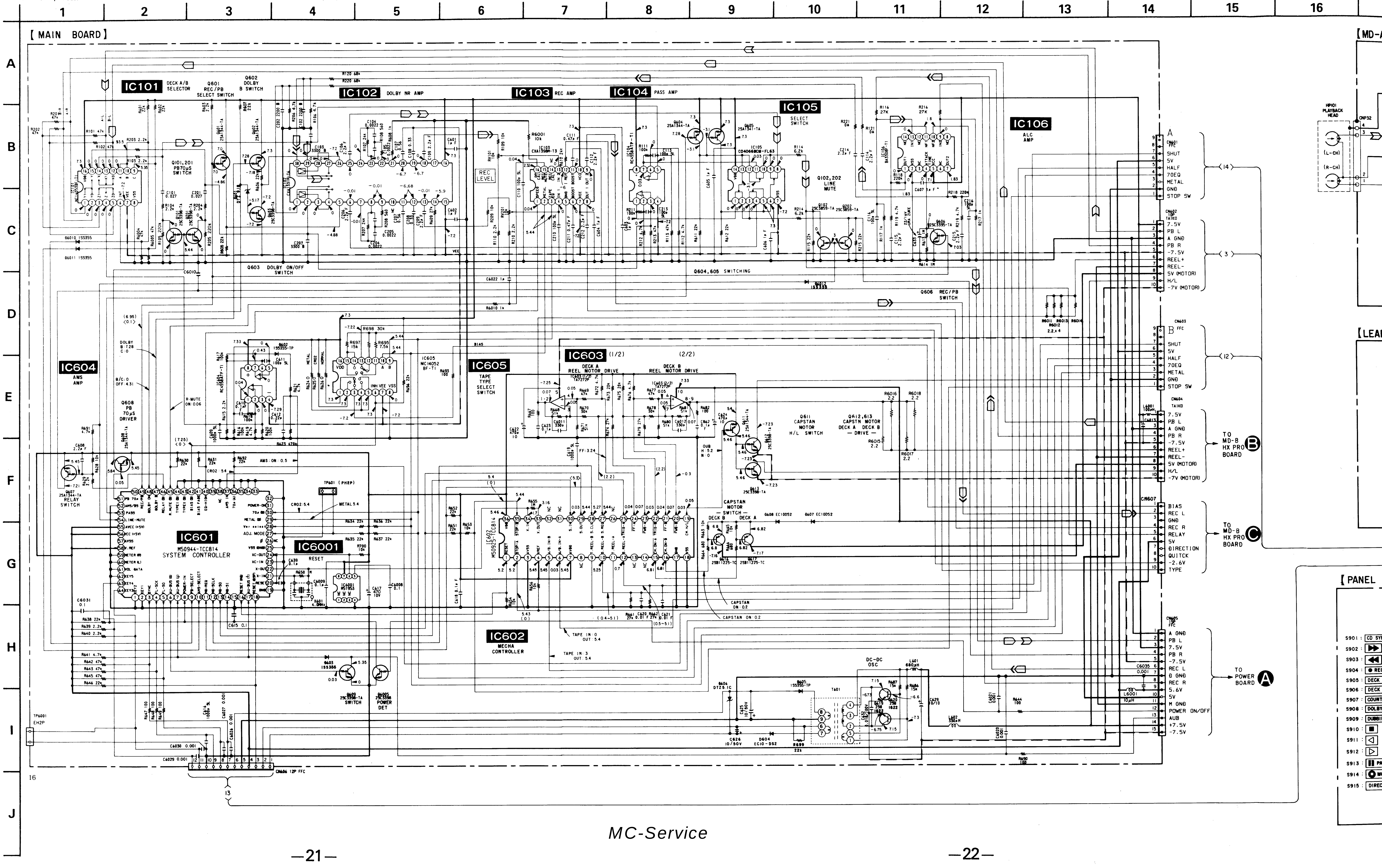
- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

MC-Service


12
13
14
15
16
17
18
19
18
19
20
21
22
23
24
25
【PANEL BOARD】
【MAIN BOARD】
M101A REEL MOTOR
M102A CAPSTAN MOTOR
WHT
BLK
CNP72
RV21A
RV11A
JW51
1-638-397-
11
S903
S911
S902
S904 REC
S910
S912
S914 MUTE
S905 DECK A
S906 DECK B
S913 PAUSE
CN351
FL351 FLUORESCENT INDICATOR TUBE
IC351
X351
S907 COUNTER RESET
S915 DIRECTION MODE
D302
D301
S901 CD SYNCHRO
S909 DUBBING MODE
S908 DOLBY NR
1-639-308-
13
TO POWER BOARD
A
12
13
14
1
2
3
CN605
CN603
CN604
CN607
CN602
CN601
TP601
L602
L601
T601
IC602
IC6001
IC601
IC604
IC605
IC103
IC101
IC102
IC105
IC104
IC106
X601
Q611
Q612
Q613
Q617
Q618
Q620
Q608
Q607
Q602
Q601
Q603
Q604
Q605
Q606
Q201
Q101
Q102
Q202
D602
D603
D604
D606
D607
D608
D6010
D6011
D6012
RV201
RV101
1-639-307-
13

MC-Service

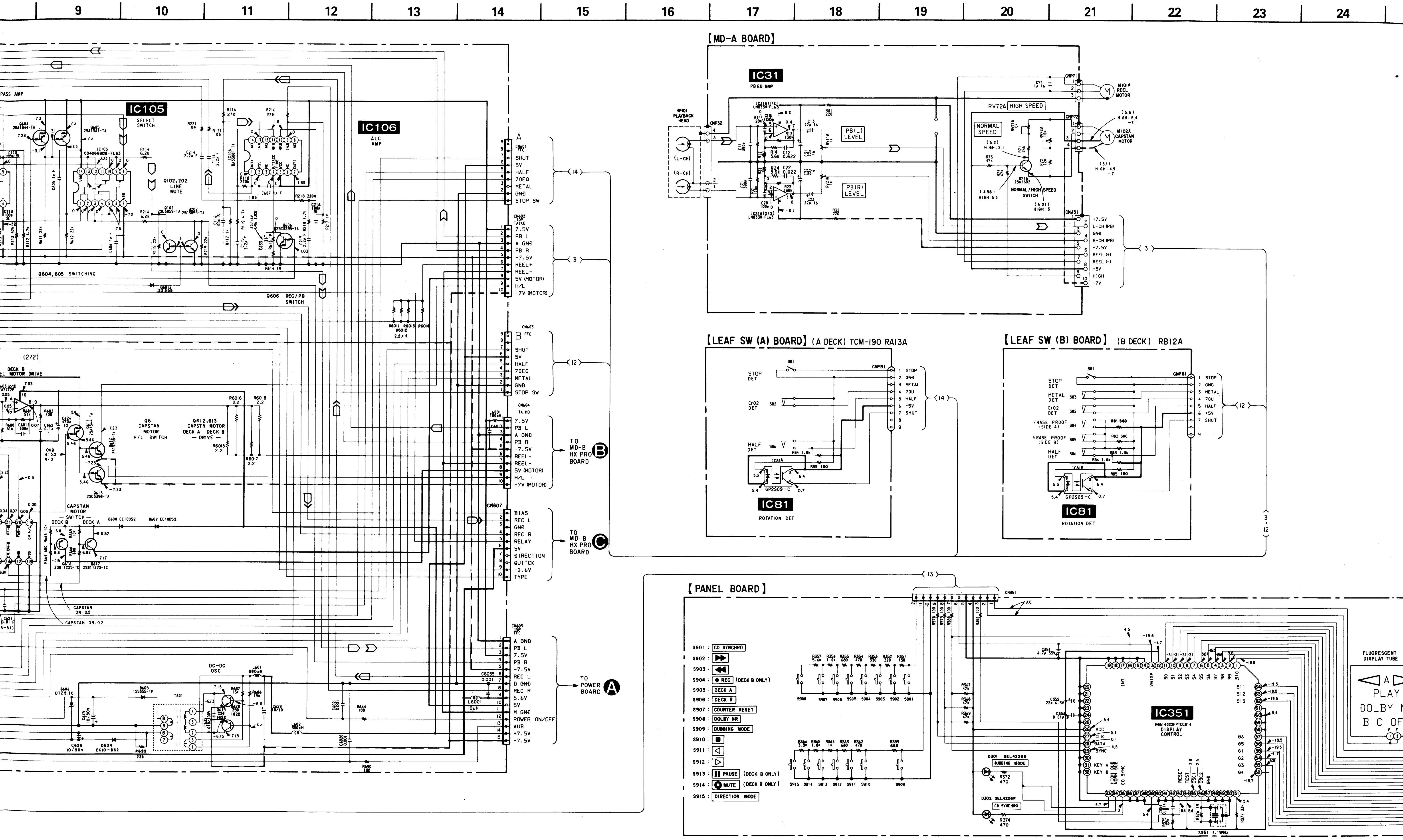
5-4. SCHEMATIC DIAGRAM – MAIN SECTION – • See page 26 for Note on Schematic Diagram. • See page 35 for Ic Block Diagram.



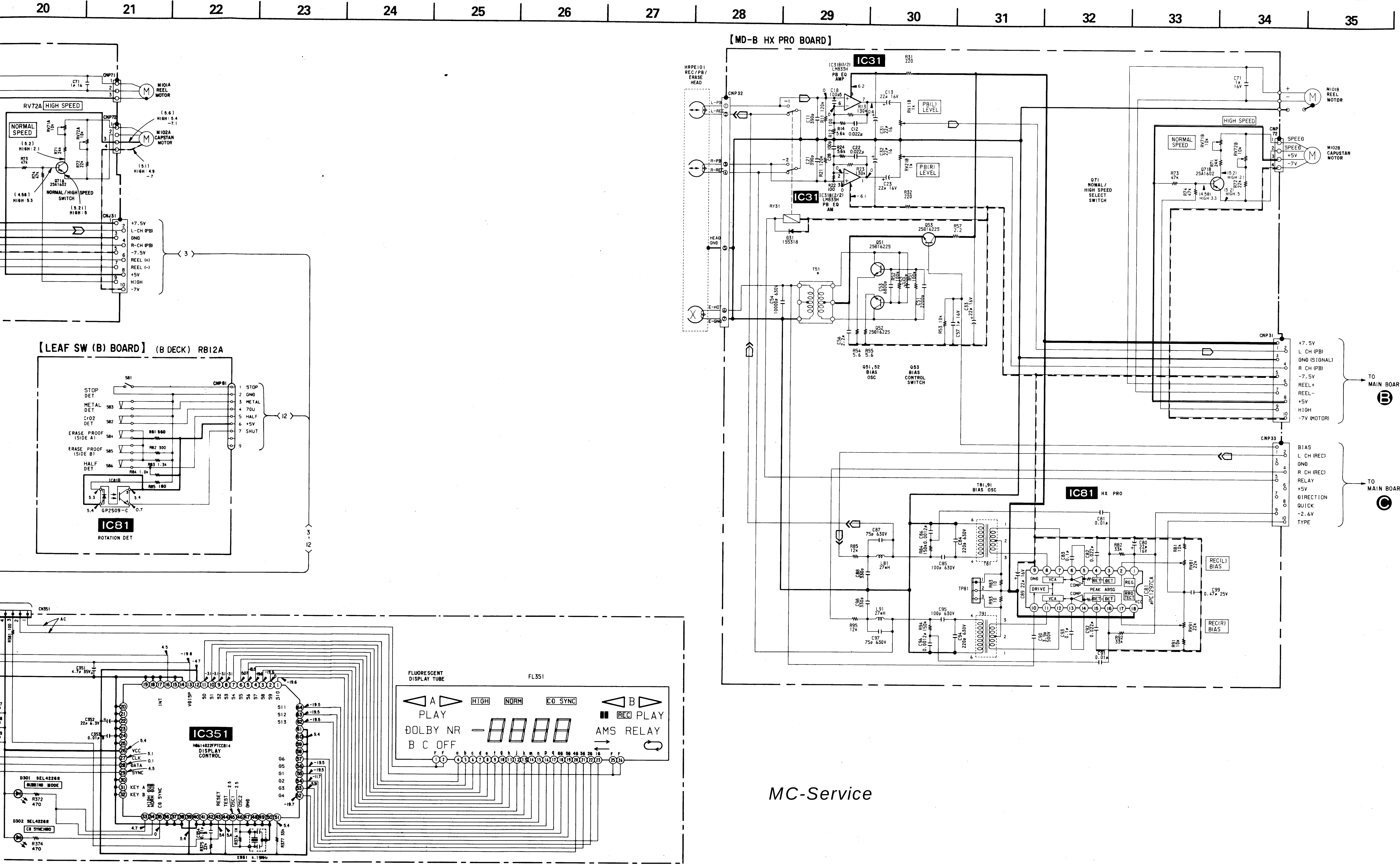
【MAIN BOARD】
IC101 DECK A/B SELECTOR
Q601 REC/PB SELECT SWITCH
Q602 DOLBY B SWITCH
IC102 DOLBY NR AMP
IC103 REC AMP
IC104 PASS AMP
IC105 SELECT SWITCH
IC106 ALC AMP
Q101,201 PB70μS SWITCH
Q603 DOLBY ON/OFF SWITCH
Q102,202 LINE MUTE
Q604,605 SWITCHING
Q606 REC/PB SWITCH
REC LEVEL
IC604 AMS AMP
Q608 PB 70μS DRIVER
Q607 RELAY SWITCH
IC605 TAPE TYPE SELECT SWITCH
IC603 (1/2) DECK A REEL MOTOR DRIVE
(2/2) DECK B REEL MOTOR DRIVE
Q611 CAPSTAN MOTOR H/L SWITCH
Q612,613 CAPSTN MOTOR DECK A DECK B – DRIVE –
CAPSTAN MOTOR – SWITCH – DECK B DECK A
IC601 M50944-TCC814 SYSTEM CONTROLLER
IC6001 RESET
TP601 (PHEP)
IC602 MECHA CONTROLLER
Q603 SWITCH
Q605 POWER DET
DC-DC OSC
T601
CN601 SHUT 5V HALF 70EQ METAL GND STOP SW
CN602 7.5V PB L A GND PB R -7.5V REEL+ REEL- 5V (MOTOR) H/L -7V (MOTOR)
CN603 SHUT 5V HALF 70EQ METAL GND STOP SW
CN604 7.5V PB L A GND PB R -7.5V REEL+ REEL- 5V (MOTOR) H/L -7V (MOTOR)
TO MD-B HX PRO BOARD B
CN607 BIAS REC L GND REC R RELAY 5V DIRECTION QUITCK -2.6V TYPE
TO MD-B HX PRO BOARD C
CN605 A GND PB L 7.5V PB R -7.5V REC L D GND REC R 5.6V 5V M GND POWER ON/OFF AUB +7.5V -7.5V
TO POWER BOARD A
CN606 12P FFC
TP6001 EH2P
HP101 PLAYBACK HEAD (L-CH) (R-CH)
CNP32
【MD-
【LEA
【PANEL
S901 : CD SY
S902 : ▶▶
S903 : ◀◀
S904 : ● REC
S905 : DECK
S906 : DECK
S907 : COUNT
S908 : DOLBY
S909 : DUBBI
S910 : ■
S911 : ◁
S912 : ▷
S913 : II PA
S914 :
S915 : DIREC

MC-Service

Ic Block Diagram.

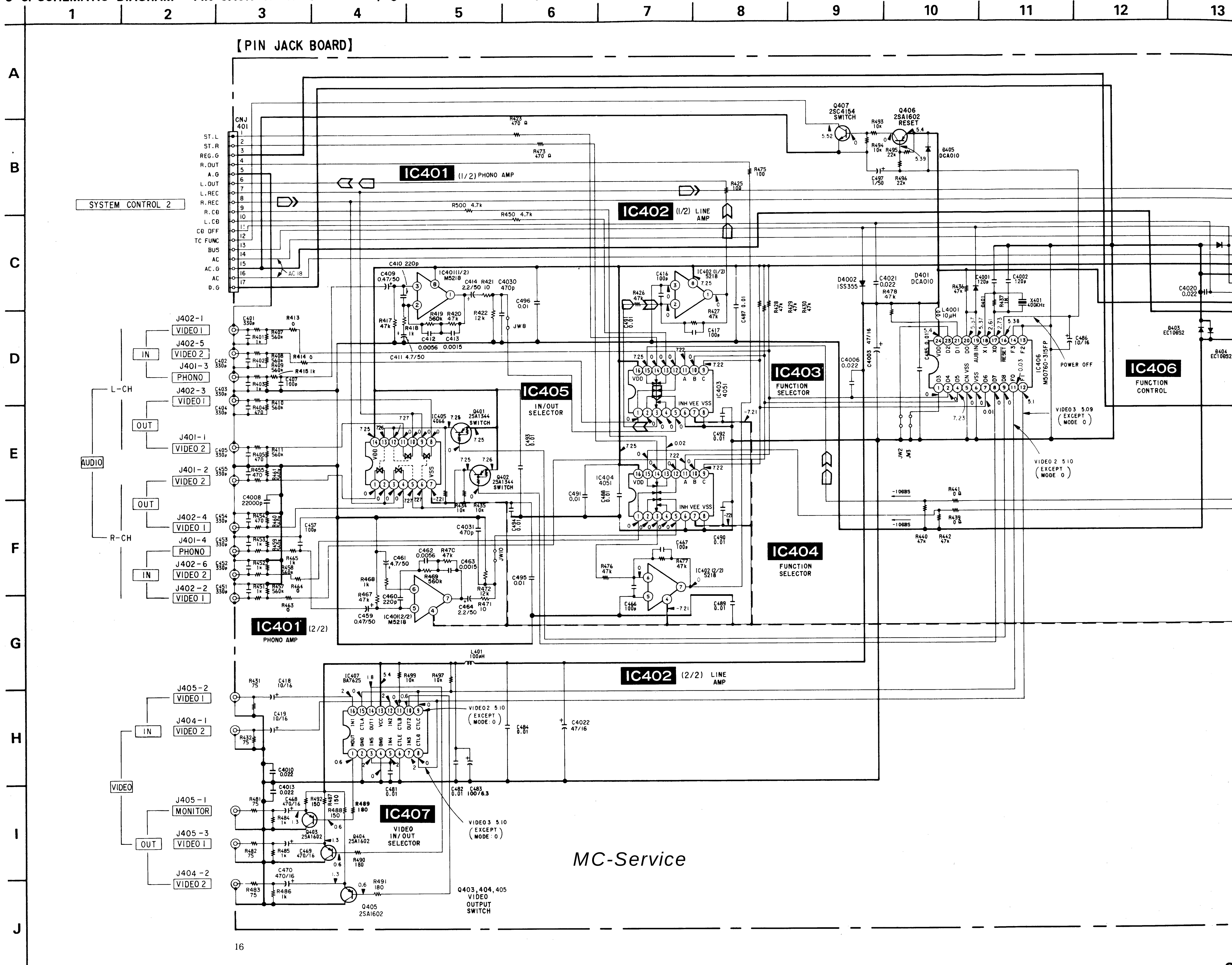


9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
IC105
SELECT SWITCH
IC106
ALC AMP
Q102,202 LINE MUTE
Q604,605 SWITCHING
Q606 REC/PB SWITCH
DECK B REEL MOTOR DRIVE
Q611 CAPSTAN MOTOR H/L SWITCH
Q612,613 CAPSTN MOTOR DECK A DECK B — DRIVE —
CAPSTAN MOTOR — SWITCH —
CAPSTAN ON 0.2
DC-DC OSC
A
CN601 FFC
SHUT
5V
HALF
70EQ
METAL
GND
STOP SW
CN602 TAIKO
7.5V
PB L
A GND
PB R
-7.5V
REEL+
REEL-
5V (MOTOR)
H/L
-7V (MOTOR)
B
CN603 FFC
CN604 TAIKO
TO MD-B HX PRO BOARD B
CN607
BIAS
REC L
GND
REC R
RELAY
5V
DIRECTION
QUITCK
-2.6V
TYPE
TO MD-B HX PRO BOARD C
CN605 FFC
A GND
PB L
7.5V
PB R
-7.5V
REC L
D GND
REC R
5.6V
5V
M GND
POWER ON/OFF
AUB
+7.5V
-7.5V
TO POWER BOARD A
【MD-A BOARD】
IC31
PB EQ AMP
HP101 PLAYBACK HEAD
(L-CH)
(R-CH)
PB(L) LEVEL
PB(R) LEVEL
RV72A HIGH SPEED
NORMAL SPEED
NORMAL/HIGH SPEED SWITCH
M101A REEL MOTOR
M102A CAPSTAN MOTOR
CNJ31
+7.5V
L-CH (PB)
GND
R-CH (PB)
-7.5V
REEL (+)
REEL (-)
+5V
HIGH
-7V
【LEAF SW (A) BOARD】 (A DECK) TCM-190 RA13A
STOP DET
CrO2 DET
HALF DET
IC81
ROTATION DET
STOP
GND
METAL
70U
HALF
+5V
SHUT
【LEAF SW (B) BOARD】 (B DECK) RB12A
METAL DET
ERASE PROOF (SIDE A)
ERASE PROOF (SIDE B)
【PANEL BOARD】
CN351
S901 : CD SYNCHRO
S902 : ▶▶
S903 : ◀◀
S904 : ● REC (DECK B ONLY)
S905 : DECK A
S906 : DECK B
S907 : COUNTER RESET
S908 : DOLBY NR
S909 : DUBBING MODE
S910 : ■
S911 : ◁
S912 : ▷
S913 : ❚❚ PAUSE (DECK B ONLY)
S914 : ○ MUTE (DECK B ONLY)
S915 : DIRECTION MODE
D301 SEL4226R DUBBING MODE
D302 SEL4226R CD SYNCHRO
IC351
DISPLAY CONTROL
FLUORESCENT DISPLAY TUBE
PLAY
DOLBY


20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
CNP71
C71 1μ 16
M101A REEL MOTOR
RV72A HIGH SPEED
NORMAL SPEED
CNP72
M102A CAPSTAN MOTOR
Q71A 2SA1602
NORMAL/HIGH SPEED SWITCH
CNJ31
+7.5V
L-CH (PB)
GND
R-CH (PB)
-7.5V
REEL (+)
REEL (-)
+5V
HIGH
-7V
3
【LEAF SW (B) BOARD】 (B DECK) RB12A
CNP81
STOP DET
METAL DET
CrO2 DET
ERASE PROOF (SIDE A)
ERASE PROOF (SIDE B)
HALF DET
1 STOP
2 GND
3 METAL
4 70U
5 HALF
6 +5V
7 SHUT
12
IC81
GP2S09-C
ROTATION DET
3 - 12
CN351
AC
IC351
HD614022FPTCC814
DISPLAY CONTROL
D301 SEL4226R
DUBBING MODE
D302 SEL4226R
CD SYNCHRO
X951 4.19MHz
FLUORESCENT DISPLAY TUBE
FL351
A
PLAY
HIGH
NORM
CD SYNC
B
REC PLAY
DOLBY NR
B C OFF
AMS RELAY
【MD-B HX PRO BOARD】
HRPE101 REC/PB/ERASE HEAD
CNP32
IC31
IC31B(1/2) LM833H PB EQ AMP
IC31B(2/2) LM833H PB EQ AMP
PB(L) LEVEL
PB(R) LEVEL
RV31
D31 1SS318
Q53 2SB1622S
Q51 2SD1622S
Q52 2SD1622S
Q51,52 BIAS OSC
Q53 BIAS CONTROL SWITCH
Q71 NOMAL/HIGH SPEED SELECT SWITCH
M101B REEL MOTOR
M102B CAPSTAN MOTOR
HIGH SPEED
NORMAL SPEED
Q71B 2SA1602
SPEED
CNP31
+7.5V
L CH (PB)
GND (SIGNAL)
R CH (PB)
-7.5V
REEL+
REEL-
+5V
HIGH
-7V (MOTOR)
TO MAIN BOARD
B
CNP33
BIAS
L CH (REC)
GND
R CH (REC)
RELAY
+5V
DIRECTION
QUICK
-2.6V
TYPE
TO MAIN BOARD
C
IC81 HX PRO
IC81 μPC1297CA
T81,91 BIAS OSC
T81
T91
TP81
REC(L) BIAS
REC(R) BIAS

MC-Service

5-5. SCHEMATIC DIAGRAM – PIN JACK SECTION – • See page 35 for IC Block Diagram.



1
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10
11
12
13
A
B
C
D
E
F
G
H
I
J
[PIN JACK BOARD]
SYSTEM CONTROL 2
CNJ 401
ST.L
ST.R
REG.G
R.OUT
A.G
L.OUT
L.REC
R.REC
R.CD
L.CD
CD OFF
TC FUNC
BUS
AC
AC.G
AC
D.G
IC401 (1/2) PHONO AMP
IC401 (2/2) PHONO AMP
IC402 (1/2) LINE AMP
IC402 (2/2) LINE AMP
IC403 FUNCTION SELECTOR
IC404 FUNCTION SELECTOR
IC405 IN/OUT SELECTOR
IC406 FUNCTION CONTROL
IC407 VIDEO IN/OUT SELECTOR
IC401(1/2) M5218
IC401(2/2) M5218
IC402 (1/2) 5218
IC402 (2/2) 5218
IC403 4051
IC404 4051
IC405 4066
IC406 M50760-315FP
IC407 BA7625
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
Q403 2SA1602
Q404 2SA1602
Q405 2SA1602
Q403,404,405 VIDEO OUTPUT SWITCH
Q406 2SA1602 RESET
Q407 2SC4154 SWITCH
D401 DCA010
D405 DCA010
D4002 1SS355
X401 400KHz
L401 100μH
L4001 10μH
POWER OFF
VIDEO3 5.09 (EXCEPT MODE 0)
VIDEO2 5.10 (EXCEPT MODE 0)
VIDEO3 5.10 (EXCEPT MODE 0)
J402-1 VIDEO 1
J402-5 VIDEO 2
J401-3 PHONO
J402-3 VIDEO 1
J401-1 VIDEO 2
J401-2 VIDEO 2
J402-4 VIDEO 1
J401-4 PHONO
J402-6 VIDEO 2
J402-2 VIDEO 1
J405-2 VIDEO 1
J404-1 VIDEO 2
J405-1 MONITOR
J405-3 VIDEO 1
J404-2 VIDEO 2
IN
OUT
L-CH
R-CH
AUDIO
VIDEO

MC-Service

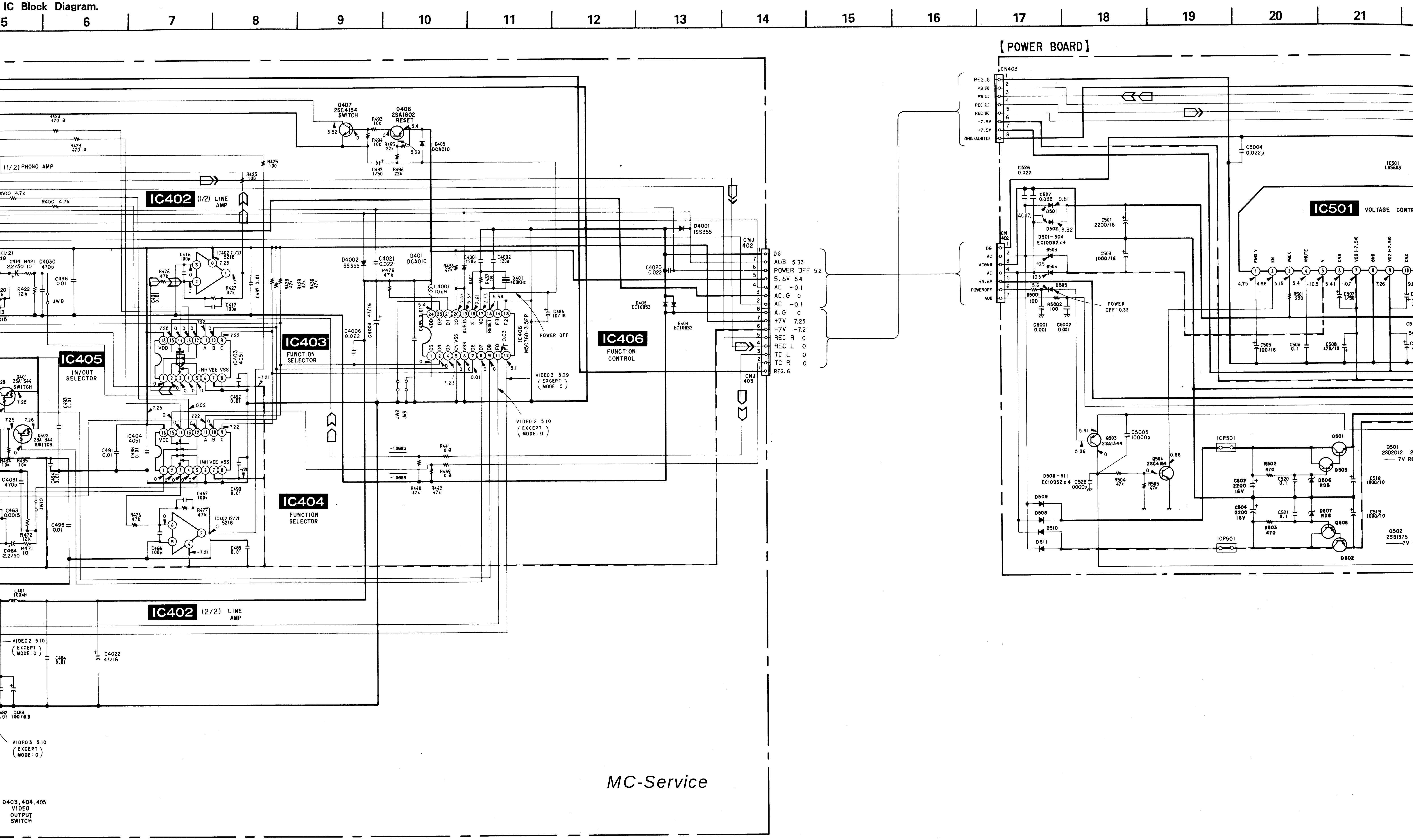
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4$ W or less unless otherwise specified.
- ━━ : B+ Line
- ▬ ▬ : B– Line
- ☐ : adjustment for repair.

  no mark: STOP
  ( ): PB
  < >: REC
- Voltages are taken with a VOM (Input impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
- Signal path.

  ⊳ : PB (DECK A)
  ▷ : PB (DECK B)
  ▷› : REC (DECK B)

IC Block Diagram.


5
6
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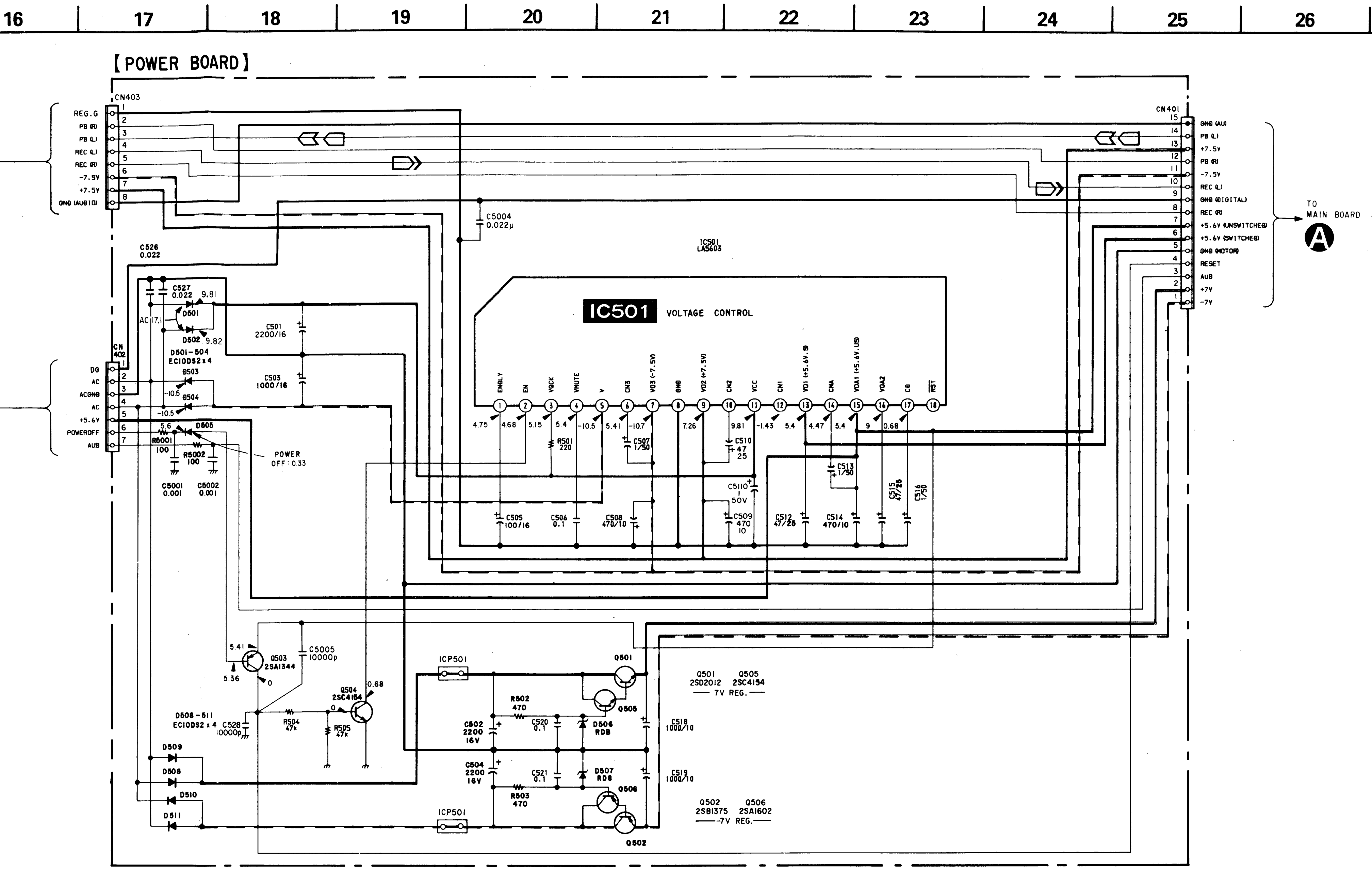
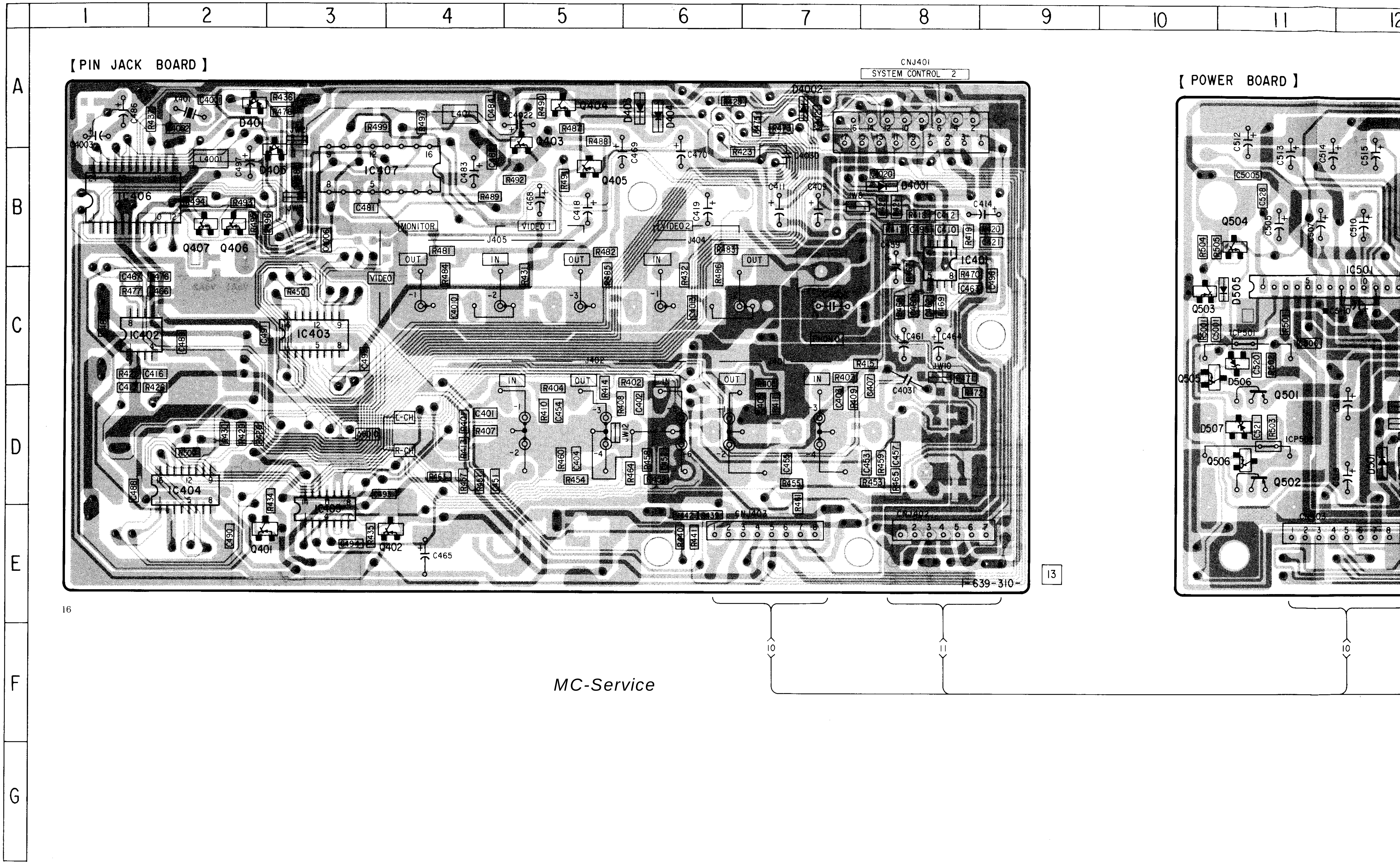
13
14
15
16
17
18
19
20
21
【POWER BOARD】
IC402 (1/2) LINE AMP
IC402 (2/2) LINE AMP
(1/2) PHONO AMP
IC403 FUNCTION SELECTOR
IC404 FUNCTION SELECTOR
IC405 IN/OUT SELECTOR
IC406 FUNCTION CONTROL
IC406 M50760-315FP
IC501 VOLTAGE CONTR
IC501 LA5603
Q407 2SC4154 SWITCH
Q406 2SA1602 RESET
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
Q403,404,405 VIDEO OUTPUT SWITCH
Q501
Q502 2SB1375 -7V
Q501 2SD2012 7V RE
Q503 2SA1344
Q504 2SC4154
Q505
Q506
D4001 1SS355
D4002 1SS355
D401 DCA010
D405 DCA010
D403 EC10DS2
D404 EC10DS2
D501-504 EC10DS2x4
D508-511 EC10DS2x4
D505
D506 RD8
D507 RD8
ICP501
X401 400KHz
L4001 10µH
L401 100µH
POWER OFF
POWER OFF: 0.33
VIDEO3 5.09 (EXCEPT MODE 0)
VIDEO2 5.10 (EXCEPT MODE 0)
VIDEO2 5.10 (EXCEPT MODE: 0)
VIDEO3 5.10 (EXCEPT MODE: 0)
CNJ 402
CNJ 403
CN 402
CN403
DG
AUB 5.33
POWER OFF 5.2
5.6V 5.4
AC -0.1
AC.G 0
AC -0.1
A.G 0
+7V 7.25
-7V -7.21
REC R 0
REC L 0
TC L 0
TC R 0
REG.G
REG.G
PB (R)
PB (L)
REC (L)
REC (R)
-7.5V
+7.5V
GND (AUDIO)
DG
AC
ACGND
AC
+5.6V
POWEROFF
AUB
-10dBS
-10dBS
C5004 0.022µ
C526 0.022
C527 0.022
C501 2200/16
C503 1000/16
C505 100/16
C506 0.1
C508 470/10
C507 1/50
C5001 0.001
C5002 0.001
C5005 10000p
C528 10000p
C502 2200 16V
C504 2200 16V
C520 0.1
C521 0.1
C518 1000/10
C519 1000/10
R501 220
R5001 100
R5002 100
R502 470
R503 470
R504 47k
R505 47k
R423 470 Ω
R473 470 Ω
R475 100
R425 100
R450 4.7k
R493 10k
R494 10k
R495 22k
R496 22k
C497 1/50
C4021 0.022
R478 47k
C4001 120p
C4002 120p
R436 47k
R437 1k
C486 10/16
C4020 0.022
C4006 0.022
C4003 47/16
C416 100p
C417 100p
R426 47k
R427 47k
C487 0.01
R428 47k
R429 47k
R430 47k
C414 2.2/50
R421
C4030 470p
C496 0.01
R422 12k
JW8
C491 0.01
C492 0.01
C493 0.01
C488 0.01
C490 0.01
C467 100p
R477 47k
R476 47k
C466 100p
C489 0.01
C495 0.01
C494 0.01
C4031 470p
R434 10k
R435 10k
C463 0.0015
R472 12k
C464 2.2/50
R471 10
JW10
R441 0 Ω
R439 0 Ω
R440 47k
R442 47k
C484 0.01
C4022 47/16
C482 0.01
C483 100/6.3
JW2
JW3
VDD
INH VEE VSS
A B C

MC-Service


16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
【POWER BOARD】
CN403
REG.G
PB (R)
PB (L)
REC (L)
REC (R)
-7.5V
+7.5V
GND (AUDIO)
C5004
0.022µ
C526
0.022
C527
0.022
9.81
AC 17.1
D501
D502
9.82
D501-504
EC10DS2x4
D503
D504
-10.5
-10.5
C501
2200/16
C503
1000/16
CN402
DG
AC
ACGND
AC
+5.6V
POWEROFF
AUB
5.6
D505
R5001
100
R5002
100
POWER
OFF : 0.33
C5001
0.001
C5002
0.001
IC501
LA5603
IC501
VOLTAGE CONTROL
ENBLY
EN
VQCK
VMUTE
V
CN3
VO3 (-7.5V)
GND
VO2 (+7.5V)
CN2
VCC
CN1
VO1 (+5.6V.S)
CNA
VOA1 (+5.6V.US)
VOA2
CB
RST
4.75
4.68
5.15
5.4
-10.5
5.41
-10.7
7.26
9.81
-1.43
5.4
4.47
5.4
9
0.68
R501
220
C507
1/50
C510
47
25
C5110
1
50V
C513
1/50
C515
47/25
C516
1/50
C505
100/16
C506
0.1
C508
470/10
C509
470
10
C512
47/25
C514
470/10
CN401
GND (AU)
PB (L)
+7.5V
PB (R)
-7.5V
REC (L)
GND (DIGITAL)
REC (R)
+5.6V (UNSWITCHED)
+5.6V (SWITCHED)
GND (MOTOR)
RESET
AUB
+7V
-7V
TO
MAIN BOARD
A
5.41
5.36
0
Q503
2SA1344
C5005
10000p
Q504
2SC4154
0.68
0
D508-511
EC10DS2 x 4
C528
10000p
R504
47k
R505
47k
D509
D508
D510
D511
ICP501
ICP501
Q501
Q505
Q502
Q506
R502
470
R503
470
C502
2200
16V
C504
2200
16V
C520
0.1
C521
0.1
D506
RD8
D507
RD8
C518
1000/10
C519
1000/10
Q501 2SD2012
Q505 2SC4154
7V REG.
Q502 2SB1375
Q506 2SA1602
-7V REG.

MC-Service

5-6. PRINTED WIRING BOARDS – PIN JACK SECTION – · See page 34 for Semiconductor Lead Layouts and Circuit Boards Lication.


1
2
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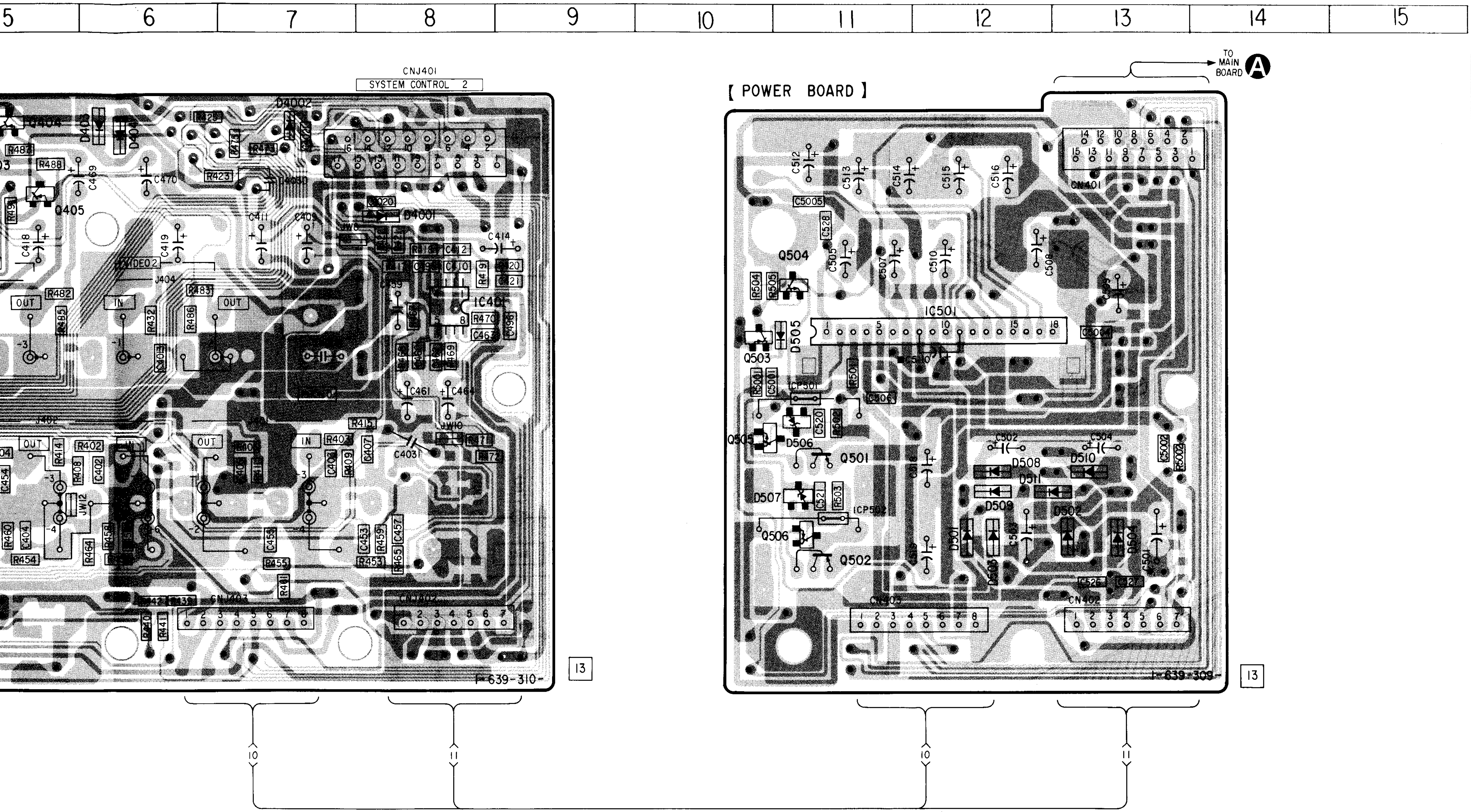
7
8
9
10
11
A
B
C
D
E
F
G
【PIN JACK BOARD】
【POWER BOARD】
CNJ401
SYSTEM CONTROL 2
IC406
IC407
IC402
IC403
IC404
IC405
IC401
IC501
D401
D402
D403
D404
D405
D4001
D4002
D505
D506
D507
Q401
Q402
Q403
Q404
Q405
Q406
Q407
Q501
Q502
Q503
Q504
Q505
Q506
X401
L401
L4001
MONITOR
VIDEO
VIDEO 1
VIDEO 2
J405
J404
J402
OUT
IN
L-CH
R-CH
JW12
JW10
JW8
CNJ403
CNJ402
CN503
ICP501
ICP502
1-639-310-
13
16
10
11

MC-Service


5
6
7
8
9
10
11
12
13
14
15
CNJ401
SYSTEM CONTROL 2
[POWER BOARD]
TO MAIN BOARD
A
CN401
IC401
IC501
Q404
Q405
Q504
Q503
D505
Q505
D506
Q501
D507
Q506
Q502
D4001
D4002
D508
D510
D511
D509
D502
D501
D503
D504
VIDEO2
J404
J402
OUT
IN
CNJ403
CNJ402
CN403
CN402
JW10
JW12
1-639-310-
1-639-309-
13
10
11

- Semiconductor Location

Ref. No.	Location
D401	A-2
D403	A-6
D404	A-6
D405	B-3
D501	D-12
D502	D-13
D503	D-12
D504	D-13
D505	C-11
D506	C-11
D507	D-11
D508	D-12
D509	D-12
D510	D-13
D511	D-13
D4001	B-8
D4002	A-7
IC401	C-8
IC402	C-1
IC403	C-3
IC404	D-2
IC405	E-3
IC406	B-1
IC407	B-3
IC501	C-12
Q401	E-3
Q402	E-4
Q403	A-5
Q404	A-5
Q405	A-5
Q406	B-2
Q407	B-2
Q501	D-11
Q502	D-11
Q503	C-10
Q504	B-11
Q505	C-10
Q506	D-11

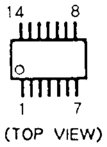
MC-Service

Note on Mounting Diagram:

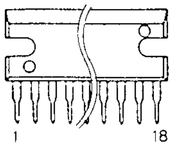
- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

5-7. SEMICONDUCTOR LEAD LAYOUTS

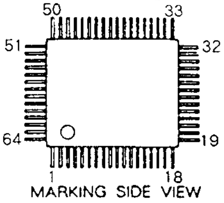
BA3308F


14
8
1
7
(TOP VIEW)

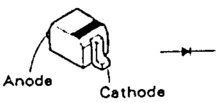
LA5603



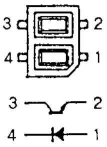
M50944-121FP


50
33
51
32
64
19
1
18
MARKING SIDE VIEW

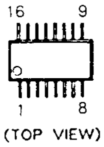
DTZ5.1C
DTZ9.1B
1SS355


Anode
Cathode

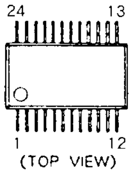
NJL5165K-B



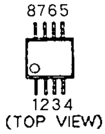
CD4052BCM-FL63
CXA1398M


16
9
1
8
(TOP VIEW)

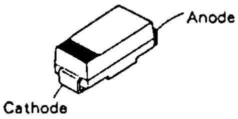
M50760-315FP


24
13
1
12
(TOP VIEW)

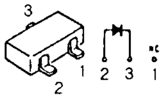
M51953BFP
M5218AFP


8765
1234
(TOP VIEW)

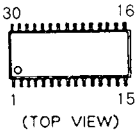
EC10DS2


Anode
Cathode

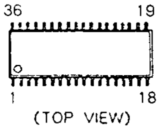
RD8.2M-B3



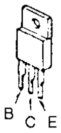
CXA1331M


30
16
1
15
(TOP VIEW)

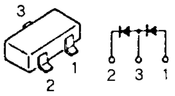
M50925-482FP


36
19
1
18
(TOP VIEW)

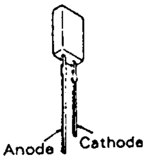
2SB1094-L
2SD2012



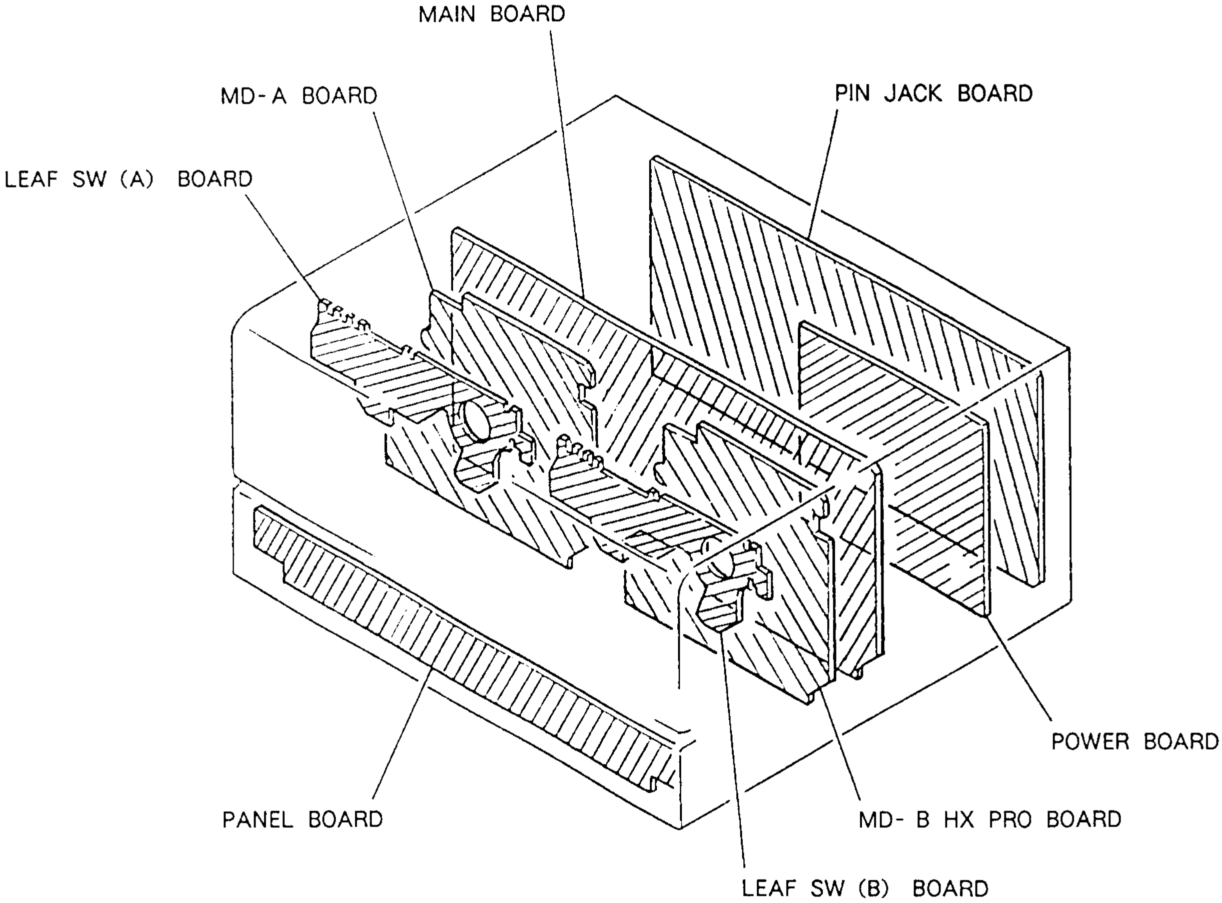
DCA010



SEL4226R-CD

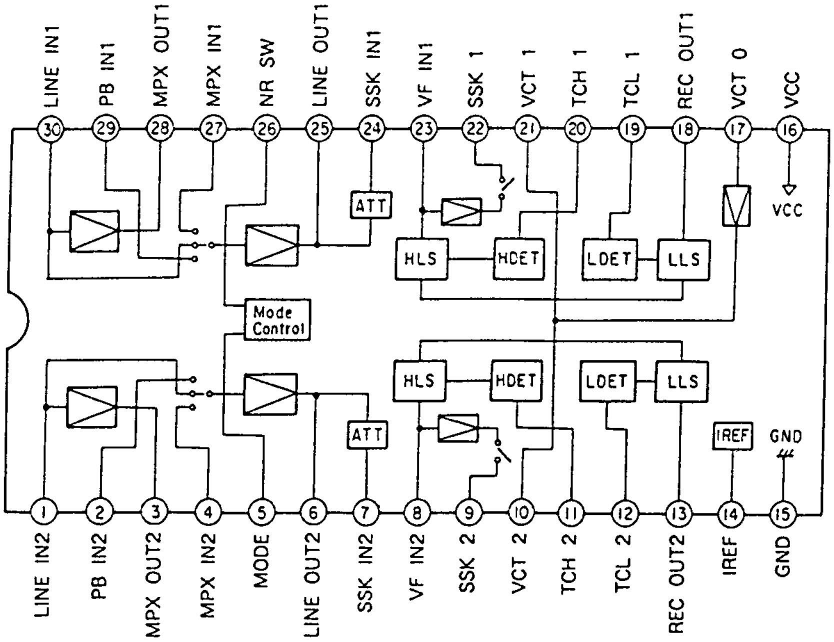

Anode
Cathode

5-8. CRICUIT BOARDS LICATION


MAIN BOARD
MD-A BOARD
PIN JACK BOARD
LEAF SW (A) BOARD
POWER BOARD
PANEL BOARD
MD-B HX PRO BOARD
LEAF SW (B) BOARD

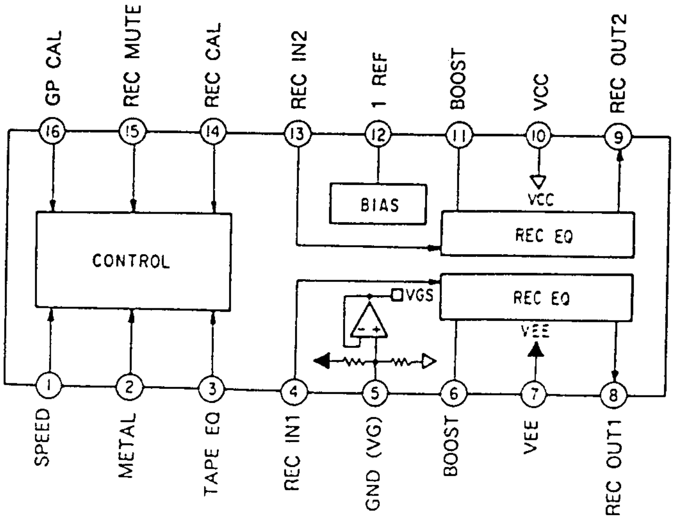
5-9. IC BLOCK DIAGRAM

IC102 CXA1331M



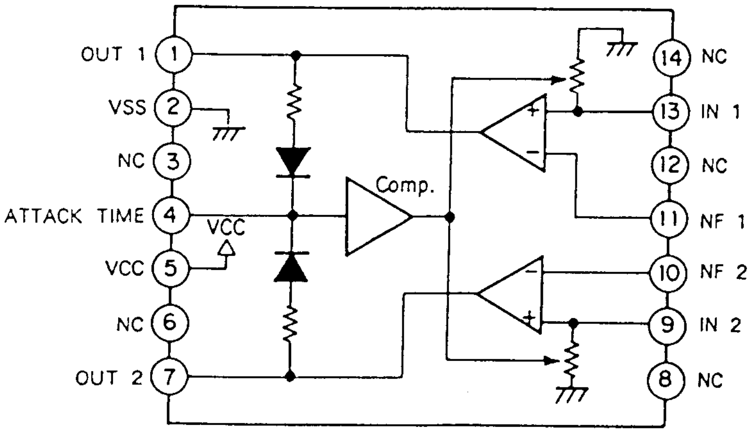
LINE IN1
PB IN1
MPX OUT1
MPX IN1
NR SW
LINE OUT1
SSK IN1
VF IN1
SSK 1
VCT 1
TCH 1
TCL 1
REC OUT1
VCT 0
VCC
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
ATT
VCC
HLS
HDET
LDET
LLS
Mode Control
HLS
HDET
LDET
LLS
ATT
IREF
GND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
LINE IN2
PB IN2
MPX OUT2
MPX IN2
MODE
LINE OUT2
SSK IN2
VF IN2
SSK 2
VCT 2
TCH 2
TCL 2
REC OUT2
IREF
GND

IC103 CXA1398M



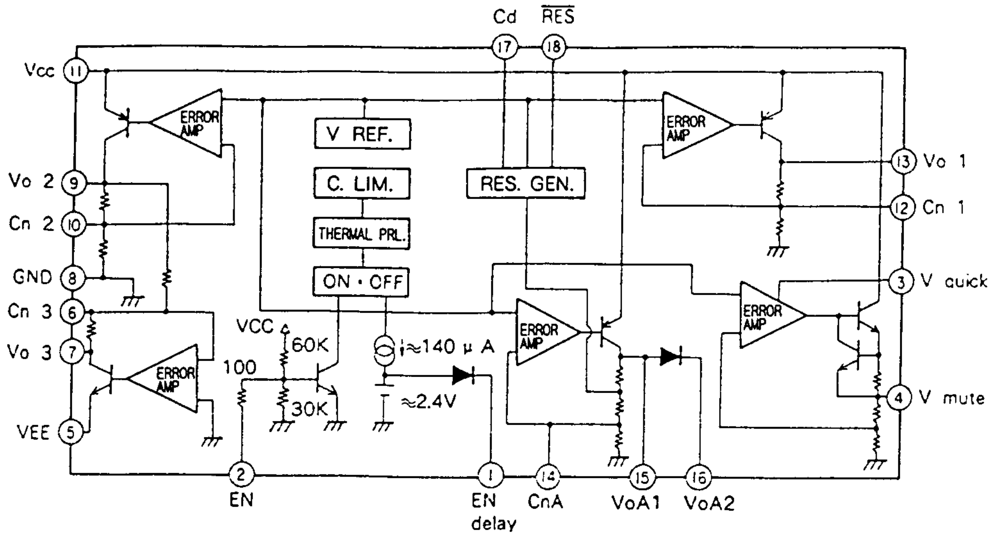
GP CAL
REC MUTE
REC CAL
REC IN2
1 REF
BOOST
VCC
REC OUT2
16
15
14
13
12
11
10
9
BIAS
VCC
REC EQ
CONTROL
VGS
REC EQ
VEE
1
2
3
4
5
6
7
8
SPEED
METAL
TAPE EQ
REC IN1
GND (VG)
BOOST
VEE
REC OUT1

IC106 BA3308F

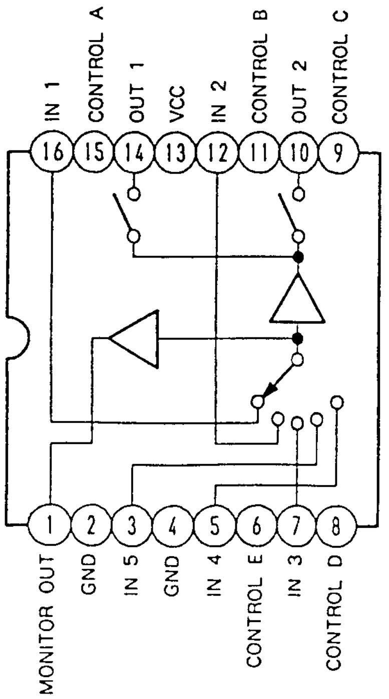


OUT 1
1
VSS
2
NC
3
ATTACK TIME
4
VCC
5
NC
6
OUT 2
7
VCC
Comp.
14
NC
13
IN 1
12
NC
11
NF 1
10
NF 2
9
IN 2
8
NC

IC501 LA5603


Cd
RES
17
18
Vcc
11
ERROR AMP
V REF.
C. LIM.
THERMAL PRL.
ON · OFF
RES. GEN.
ERROR AMP
13
Vo 1
12
Cn 1
Vo 2
9
Cn 2
10
GND
8
Cn 3
6
Vo 3
7
VEE
5
ERROR AMP
VCC
60K
100
30K
≈140 μ A
≈2.4V
ERROR AMP
ERROR AMP
3
V quick
4
V mute
2
EN
1
EN delay
14
CnA
15
VoA1
16
VoA2

IC407 BA7625

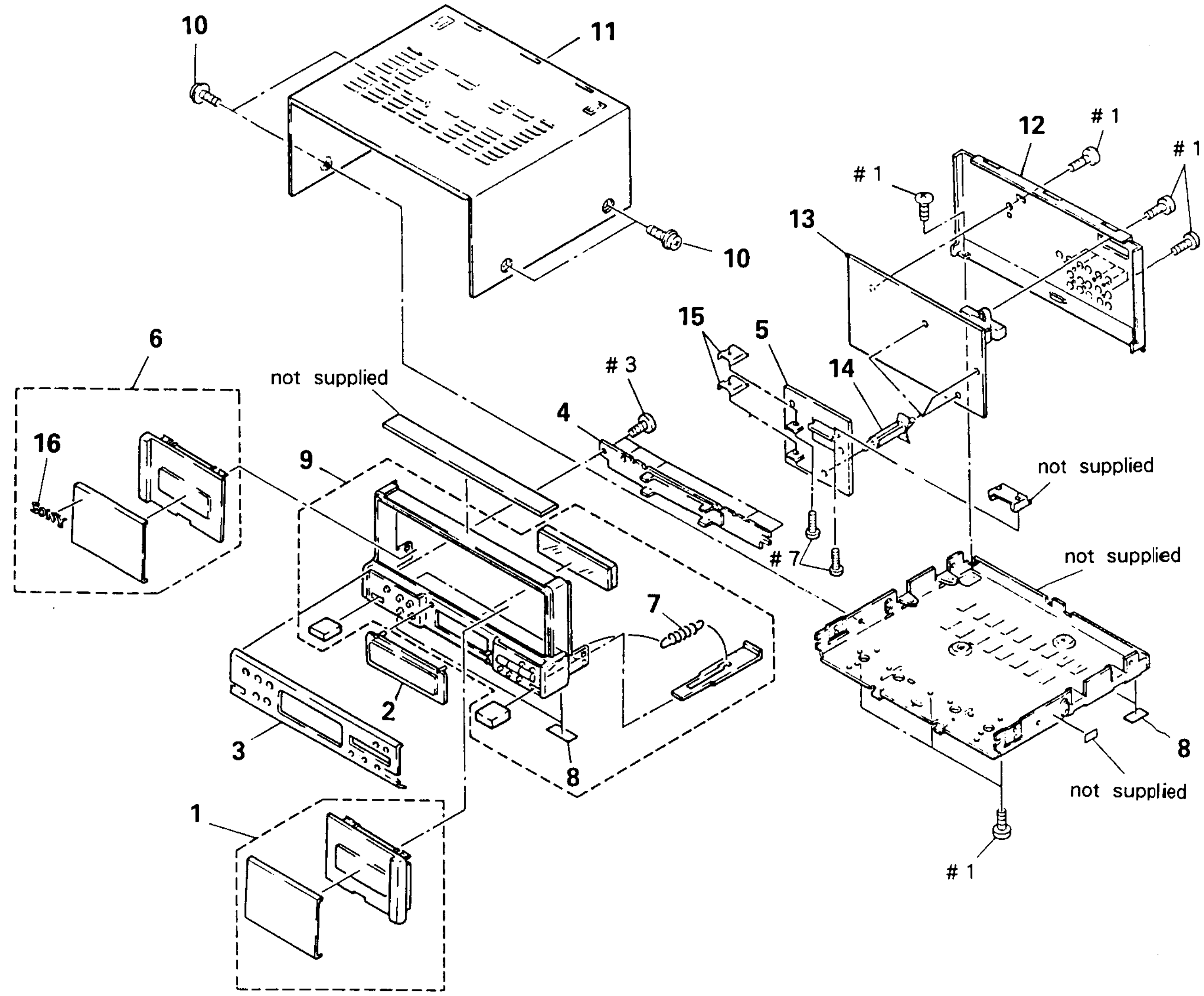

IN 1
CONTROL A
OUT 1
VCC
IN 2
CONTROL B
OUT 2
CONTROL C
16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
MONITOR OUT
GND
IN 5
GND
IN 4
CONTROL E
IN 3
CONTROL D

SECTION 6
EXPLODED VIEWS

NOTE :

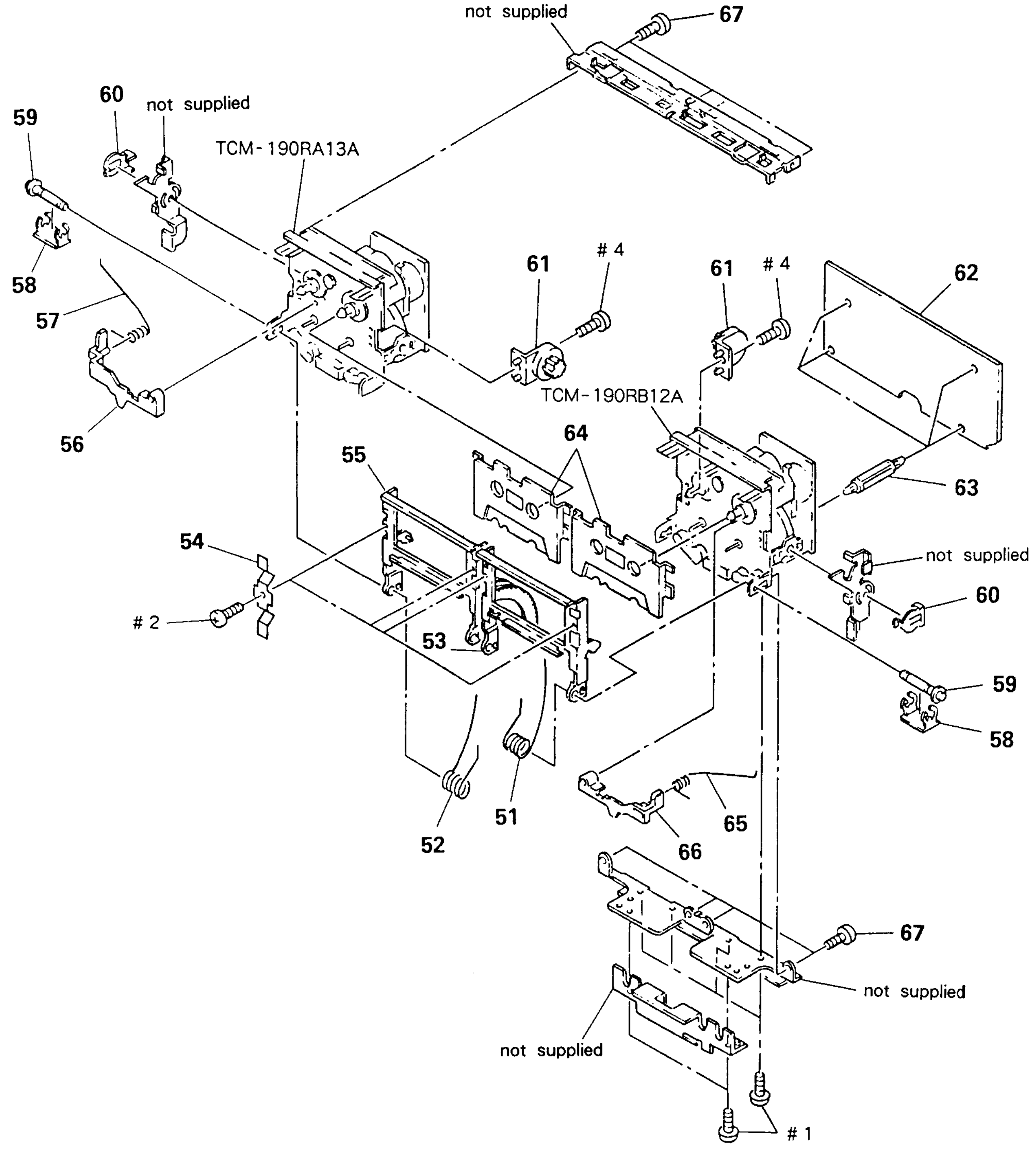
- – XX, – X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

6-1. FRONT PANEL SECTION-1



Ref. No.	Part No.	Description	Remarks
1	X-3363-046-1	LID (B) ASSY, CASSETTE	
2	X-3362-924-1	WINDOW (PANEL) ASSY	
3	3-367-891-01	PLATE (PANEL), ORNAMENTAL	
4	* A-2006-413-A	PANEL BOARD	
5	* A-2006-612-A	POWER BOARD	
6	X-3363-140-1	LID (A) ASSY, CASSETTE	
7	3-567-110-00	SPRING, TENSION	
8	4-930-336-01	FOOT (FELT)	
9	X-3362-925-1	PANEL ASSY, FRONT	
10	3-363-099-01	SCREW (CASE +3X8 TP2)	
11	* 4-932-841-01	CASE	
12	* 3-366-761-11	PANEL, BACK	
13	* A-2006-416-A	PIN JACK BOARD	
14	* 3-703-353-02	SUPPORT, PC BOARD	
15	* 3-309-144-21	HEAT SINK	
16	4-942-636-01	EMBLEM (NO. 3. 5), SONY	

6-2. FRONT PANEL SECTION-2


not supplied
67
60
not supplied
59
TCM-190RA13A
58
57
56
61
# 4
61
# 4
62
TCM-190RB12A
64
55
63
54
not supplied
60
# 2
53
59
58
52
51
65
66
67
not supplied
not supplied
# 1

Ref. No.	Part No.	Description	Remarks
51	3-354-960-01	SPRING (LOADING R), TORSION	
52	3-354-959-01	SPRING (LOADING L), TORSION	
53	X-3362-856-1	HOLDER (R) ASSY, CASSETTE	
54	3-340-137-01	SPRING, CASSETTE RETAINER	
55	X-3362-857-1	HOLDER (L) ASSY, CASSETTE	
56	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
57	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
58	3-367-720-01	RING (W), RETAINING	
59	3-367-721-01	SHAFT (FULCRUM SHAFT)	
60	3-354-957-01	JOINT (LOCK LEVER)	
61	3-354-963-01	DAMPER	
62	* A-2006-412-A	MAIN BOARD	
63	* 3-682-419-21	HOLDER, P.C.B	
64	3-367-711-01	RETAINER, CASSETTE	
65	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
66	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
67	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	

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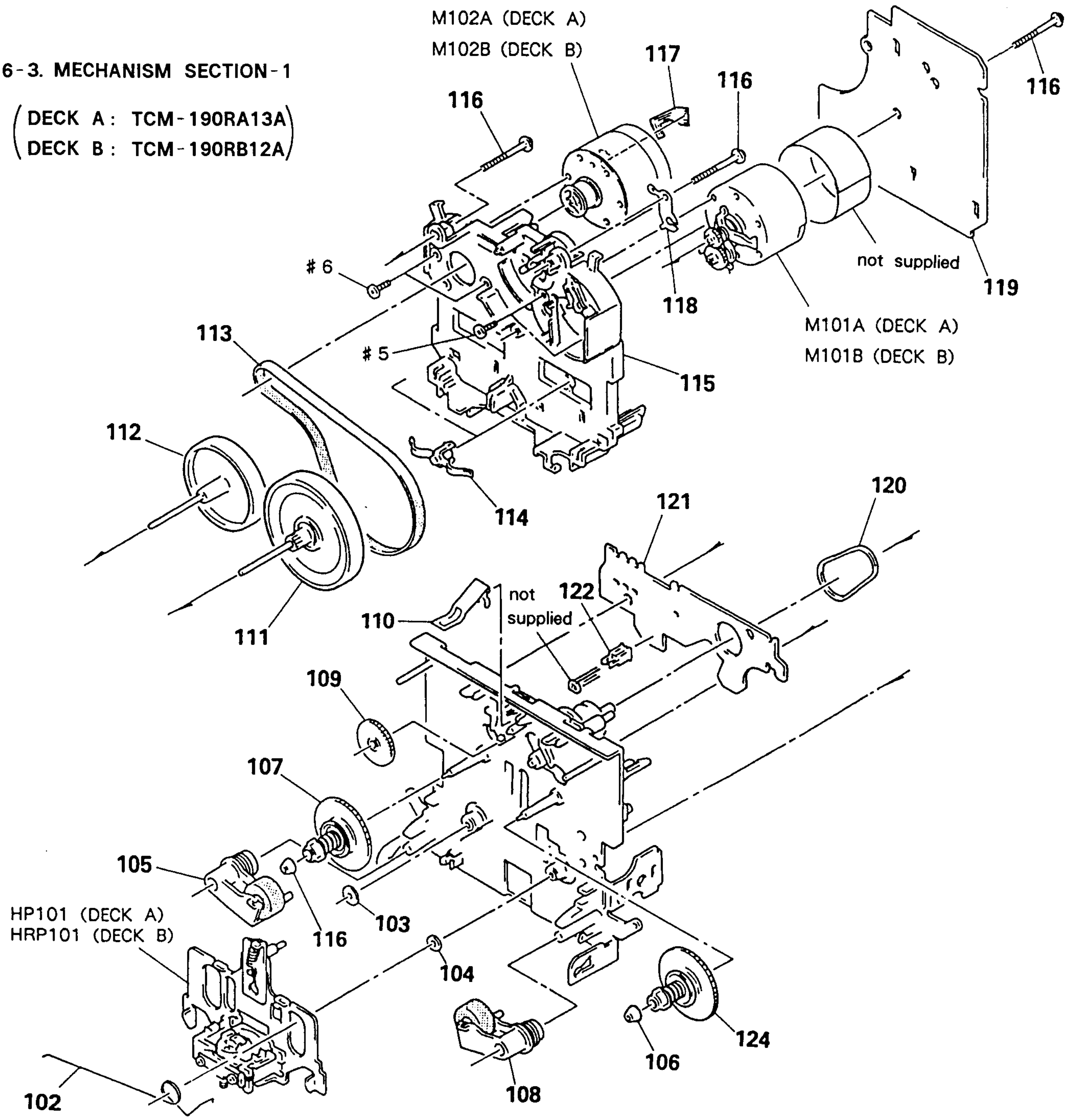
6-3. MECHANISM SECTION-1

(DECK A : TCM-190RA13A
DECK B : TCM-190RB12A)


M102A (DECK A)
M102B (DECK B)
117
116
116
116
#6
118
119
not supplied
M101A (DECK A)
M101B (DECK B)
113
#5
115
112
114
121
120
111
110
not
supplied
122
109
107
105
116
103
HP101 (DECK A)
HRP101 (DECK B)
104
124
106
108
102

Ref. No.	Part No.	Description	Remarks
102	3-359-455-01	SPRING, TORSION	
103	3-356-714-01	WASHER	
104	3-356-713-01	WASHER	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
106	3-362-308-01	CAP (REEL)	
107	X-3362-078-1	TABLE ASSY (B), REEL	
108	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
109	3-359-424-01	GEAR (REV GEAR)	
110	3-359-430-01	SPRING(CASSETTE RETAINER),LEAF	
111	X-3359-406-1	FLYWHEEL (FWD) COMPLETE ASSY	
112	X-3359-410-1	FLYWHEEL (REV) ASSY	
113	3-359-417-01	BELT (FLAT), CAPSTAN	
114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
115	* 3-359-436-01	BASE (THRUST RETAINER),FITTING	
116	3-359-414-01	SCREW (+PTPWH 2X23)	
117	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
118	3-359-450-01	PLATE, GROUND	
119	* A-2006-401-A	MD-B HX PRO BOARD (DECK B)	
	* A-2006-399-A	MD-A BOARD (DECK A)	
120	3-359-466-01	BELT (FR), SQUARE	
121	* 1-634-841-11	LEAF SW(A) BOARD (DECK A)	
	* 1-634-841-11	LEAF SW(B) (DECK B)	
122	3-343-419-01	HOLDER (S SENSOR A)	
124	X-3359-404-1	TABLE ASSY, REEL	
HP101	A-2003-868-A	BASE ASSY, HEAD (DECK A)	
HRP101	A-2003-838-A	BASE ASSY, HEAD (DECK B)	
M101A	A-2003-474-A	MOTOR (REEL MOTOR) ASSY (DECK A)	
M101B	A-2003-474-A	MOTOR (REEL MOTOR) ASSY (DECK B)	
M102A	X-3359-417-1	MOTOR (CAPSTAN MOTOR) ASSY (DECK A)	
M102B	X-3359-417-1	MOTOR (CAPSTAN MOTOR) ASSY (DECK B)	

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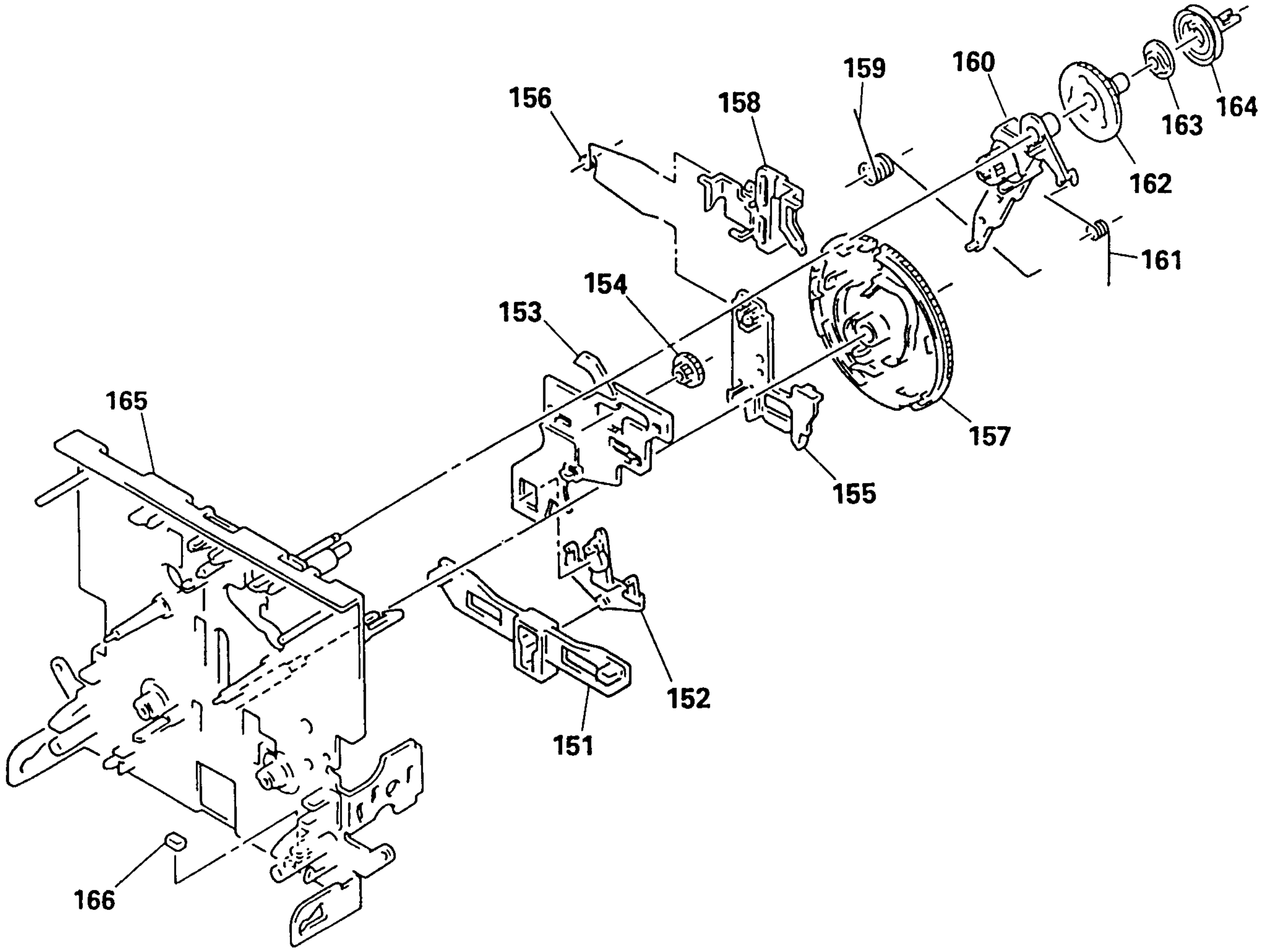
6-4. MECHANISM SECTION-2

(DECK A : TCM-190RA13A
DECK B : TCM-190RB12A)



Ref. No.	Part No.	Description	Remarks
151	* 3-359-425-01	SLIDER (REVERSE SLIDER)	
152	3-359-426-01	LEVER (REVERSE LEVER)	
153	* 3-359-415-01	SLIDER (TRIGGER SLIDER)	
154	3-359-448-01	GEAR (TRIGGER)	
155	* 3-359-427-01	SLIDER (LEVERSE SLIDER)	
156	3-359-454-01	SPRING, TORSION	
157	3-359-420-01	GEAR (CAM GEAR)	
158	3-359-429-01	SLIDER (BRAKE PLATE)	
159	3-359-456-01	SPRING(TRIGGER SPRING), TORSION	
160	X-3359-405-1	LEVER (FR ARM) ASSY	
161	3-359-453-01	SPRING (FR ARM), TORSION	
162	3-359-419-01	GEAR (FR GEAR)	
163	3-359-421-01	CLUTCH (REEL DISK)	
164	3-359-418-01	PULLEY (FR PULLEY)	
165	X-3359-415-1	CHASSIS ASSY, MECHANICAL	
166	3-359-469-01	SPACER	

SECTION 7
ELECTRICAL PARTS LIST

MAIN **PANEL** **PIN JACK** **POWER**

NOTE :

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be defferent from the parts specified in the diagrams or the components used on the set.
- − XX, − X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... ,
  uPB... , μPB... , uPC... , μPC... ,
  uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description				Remarks
	* A-2006-412-A	MAIN BOARD				
		**********				
	* A-2006-413-A	PANEL BOARD				
		***********				
	* A-2006-416-A	PIN JACK BOARD				
		**************				
	* A-2006-612-A	POWER BOARD				
		***********				
	* 3-309-144-21	HEAT SINK				
	* 3-367-839-01	HOLDER, FL TUBE				
	9-911-863-XX	SPACER				
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S				
		〈 CAPACITOR 〉				
C101	1-136-158-00	FILM	0.027uF	5%	50V	
C102	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C103	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	
C104	1-106-351-00	MYLAR	2200PF	5%	200V	
C105	1-106-351-00	MYLAR	2200PF	5%	200V	
C106	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C107	1-136-174-00	FILM	0.56uF	5%	50V	
C108	1-136-171-00	FILM	0.33uF	5%	50V	
C109	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C110	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C111	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C112	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C113	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C114	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C115	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C116	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C201	1-136-158-00	FILM	0.027uF	5%	50V	
C202	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C203	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	
C204	1-106-351-00	MYLAR	2200PF	5%	200V	
C205	1-106-351-00	MYLAR	2200PF	5%	200V	
C206	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C207	1-136-174-00	FILM	0.56uF	5%	50V	
C208	1-136-171-00	FILM	0.33uF	5%	50V	
C209	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C210	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C211	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C212	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C213	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C214	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C215	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C216	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C351	1-126-163-11	ELECT	4.7uF	20%	50V	
C352	1-124-638-11	ELECT	22uF	20%	10V	
C353	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C354	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C401	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C402	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C404	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C405	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C407	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C409	1-124-465-00	ELECT	0.47uF	20%	50V	
C410	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C411	1-126-163-11	ELECT	4.7uF	20%	50V	
C412	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	
C413	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	
C414	1-124-257-00	ELECT	2.2uF	20%	50V	
C416	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C417	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C418	1-126-157-11	ELECT	10uF	20%	16V	
C419	1-126-157-11	ELECT	10uF	20%	16V	
C451	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C452	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C453	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	

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MAIN PANEL PIN JACK POWER

Ref. No.	Part No.	Description				Remarks
C454	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C455	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C459	1-124-465-00	ELECT	0.47uF	20%	50V	
C460	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C461	1-126-163-11	ELECT	4.7uF	20%	50V	
C462	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	
C463	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	
C464	1-124-257-00	ELECT	2.2uF	20%	50V	
C466	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C467	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C468	1-126-012-11	ELECT	470uF	20%	16V	
C469	1-126-012-11	ELECT	470uF	20%	16V	
C470	1-126-012-11	ELECT	470uF	20%	16V	
C481	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C482	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C483	1-126-177-11	ELECT	100uF	20%	10V	
C484	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C485	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C486	1-126-157-11	ELECT	10uF	20%	16V	
C487	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C488	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C489	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C490	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C491	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C492	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C493	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C494	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C495	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C496	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C497	1-126-301-11	ELECT	1uF	20%	50V	
C501	1-124-556-11	ELECT	2200uF	20%	16V	
C502	1-124-556-11	ELECT	2200uF	20%	16V	
C503	1-124-360-00	ELECT	1000uF	20%	16V	
C504	1-124-556-11	ELECT	2200uF	20%	16V	
C505	1-126-023-11	ELECT	100uF	20%	16V	
C506	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C507	1-124-903-11	ELECT	1uF	20%	50V	
C508	1-124-472-11	ELECT	470uF	20%	10V	
C509	1-124-472-11	ELECT	470uF	20%	10V	
C510	1-124-477-11	ELECT	47uF	20%	25V	
C512	1-124-477-11	ELECT	47uF	20%	25V	
C513	1-124-903-11	ELECT	1uF	20%	50V	
C514	1-124-472-11	ELECT	470uF	20%	10V	
C515	1-124-477-11	ELECT	47uF	20%	25V	
C516	1-124-903-11	ELECT	1uF	20%	50V	
C518	1-124-473-11	ELECT	1000uF	20%	10V	
C519	1-124-473-11	ELECT	1000uF	20%	10V	
C520	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C521	1-163-038-00	CERAMIC CHIP	0.1uF		25V	

Ref. No.	Part No.	Description				Remarks
C526	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C527	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C528	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C601	1-164-346-11	CERAMIC CHIP	1uF		16V	
C602	1-164-346-11	CERAMIC CHIP	1uF		16V	
C603	1-164-346-11	CERAMIC CHIP	1uF		16V	
C604	1-164-346-11	CERAMIC CHIP	1uF		16V	
C605	1-164-346-11	CERAMIC CHIP	1uF		16V	
C606	1-164-346-11	CERAMIC CHIP	1uF		16V	
C607	1-164-346-11	CERAMIC CHIP	1uF		16V	
C608	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C609	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C610	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C611	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C612	1-164-222-11	CERAMIC CHIP	0.22uF		25V	
C615	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C616	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C617	1-124-472-11	ELECT	470uF	20%	10V	
C618	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C619	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C620	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C621	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C622	1-124-472-11	ELECT	470uF	20%	10V	
C623	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C624	1-124-472-11	ELECT	470uF	20%	10V	
C625	1-126-059-11	ELECT	10uF	20%	50V	
C626	1-126-059-11	ELECT	10uF	20%	50V	
C629	1-126-157-11	ELECT	10uF	20%	16V	
C632	1-136-594-11	FILM	0.018uF	5%	100V	
C633	1-124-234-00	ELECT	22uF	20%	16V	
C639	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C862	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C4001	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C4002	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C4003	1-124-589-11	ELECT	47uF	20%	16V	
C4006	1-101-005-00	CERAMIC	22000PF		50V	
C4008	1-101-005-00	CERAMIC	22000PF		50V	
C4010	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4013	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4020	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4021	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4022	1-124-589-11	ELECT	47uF	20%	16V	
C4030	1-163-133-00	CERAMIC	470P	5%	50V	
C4031	1-163-133-00	CERAMIC	470P	5%	50V	
C5001	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C5002	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C5004	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C5005	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C5110	1-124-903-11	ELECT	1uF	20%	50V	
C6008	1-163-038-00	CERAMIC CHIP	0.1uF		25V	

MAIN **PANEL** **PIN JACK** **POWER**

Ref. No.	Part No.	Description	Remarks
C6009	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C6010	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C6011	1-163-129-00	CERAMIC CHIP 330PF 5% 50V	
C6012	1-163-129-00	CERAMIC CHIP 330PF 5% 50V	
C6013	1-126-023-11	ELECT 100uF 20% 16V	
C6020	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C6021	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C6022	1-164-346-11	CERAMIC CHIP 1uF 16V	
C6026	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C6027	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C6029	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C6030	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C6031	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C6035	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
		(CONNECTOR)	
CN351	1-580-883-21	SOCKET, CONNECTOR (SMT) 12P	
CN401	* 1-568-834-11	SOCKET, CONNECTOR 15P	
CN402	* 1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P	
CN403	* 1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P	
CN601	1-573-101-11	SOCKET, CONNECTOR 9P	
CN602	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN603	1-573-101-11	SOCKET, CONNECTOR 9P	
CN604	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN605	* 1-568-858-11	SOCKET, CONNECTOR 15P	
CN606	1-568-795-11	SOCKET, CONNECTOR 12P	
CN607	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CNJ401	* 1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)	
		(DIODE)	
D301	8-719-312-30	DIODE SEL4226R-CD	
D302	8-719-312-30	DIODE SEL4226R-CD	
D401	8-719-990-36	DIODE DCA010	
D403	8-719-210-33	DIODE EC10DS2	
D404	8-719-210-33	DIODE EC10DS2	
D405	8-719-990-36	DIODE DCA010	
D501	8-719-210-33	DIODE EC10DS2	
D502	8-719-210-33	DIODE EC10DS2	
D503	8-719-210-33	DIODE EC10DS2	
D504	8-719-210-33	DIODE EC10DS2	
D505	8-719-988-62	DIODE 1SS355T	
D506	8-719-106-36	DIODE RD8.2M-B3	
D507	8-719-106-36	DIODE RD8.2M-B3	
D508	8-719-210-33	DIODE EC10DS2	
D509	8-719-210-33	DIODE EC10DS2	
D510	8-719-210-33	DIODE EC10DS2	
D511	8-719-210-33	DIODE EC10DS2	
D601	8-719-977-24	DIODE DTZ9.1B	
D602	8-719-988-62	DIODE 1SS355	
D603	8-719-988-62	DIODE 1SS355	

Ref. No.	Part No.	Description	Remarks
D604	8-719-210-33	DIODE EC10DS2	
D605	8-719-988-62	DIODE 1SS355	
D606	8-719-977-00	DIODE DTZ5.1C	
D607	8-719-210-33	DIODE EC10DS2	
D608	8-719-210-33	DIODE EC10DS2	
D4001	8-719-988-62	DIODE 1SS355	
D4002	8-719-988-62	DIODE 1SS355	
D6010	8-719-988-62	DIODE 1SS355	
D6011	8-719-988-62	DIODE 1SS355	
D6012	8-719-988-62	DIODE 1SS355	
		(INDICATOR)	
FL351	1-519-638-11	INDICATOR TUBE, FLUORESCENT	
		(IC)	
IC101	8-759-300-71	IC HD4053BFP	
IC102	8-752-037-90	IC CXA1331M	
IC103	8-752-056-00	IC CXA1398M	
IC104	8-759-636-55	IC M5218AFP	
IC105	8-759-516-47	IC CD4066BCM-FL63	
IC106	8-759-998-71	IC BA3308F	
IC351	8-759-323-35	IC HD-614023-FA93	
IC401	8-759-636-55	IC M5218AFP	
IC402	8-759-636-55	IC M5218AFP	
IC403	8-759-009-05	IC MC14051BF	
IC404	8-759-009-05	IC MC14051BF	
IC405	8-759-516-47	IC CD4066BCM-FL63	
IC406	8-759-636-35	IC M50760-315FP	
IC407	8-759-991-77	IC BA7625	
IC501	8-759-823-46	IC LA5603	
IC601	8-759-636-37	IC M50944-121FP	
IC602	8-759-636-67	IC M50925-482FP	
IC603	8-759-207-05	IC TA7272P	
IC604	8-759-636-55	IC M5218AFP-T1	
IC605	8-759-516-41	IC CD4052BCM-FL63	
IC6001	8-759-634-43	IC M51953BFP-T1	
		(IC LINK)	
ICP501	1-532-843-21	LINK, IC	
ICP502	1-532-843-21	LINK, IC	
		(JACK)	
J401	1-565-304-11	JACK, PIN 4P (AODIO)	
J402	* 1-569-812-11	JACK, PIN 6P (AUDIO)	
J404	1-573-144-11	JACK, PIN 2P (VIDEO)	
J405	1-565-933-11	JACK, PIN 3P (VIDEO)	
		(JUMPER)	
JW2	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW3	1-216-295-00	METAL CHIP 0 5% 1/10W	

MC-Service

MAIN PANEL PIN JACK POWER

Ref. No.	Part No.	Description	Remarks
JW8	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW10	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW12	1-216-295-00	METAL CHIP 0 5% 1/10W	
		(COIL)	
L401	1-408-789-21	INDUCTOR CHIP 100uH	
L601	1-410-761-11	INDUCTOR 0.68mH	
L602	1-410-757-21	INDUCTOR 0.33mH	
L4001	1-408-777-00	INDUCTOR CHIP 10uH	
L6001	1-410-482-31	INDUCTOR 100uH	
L6002	1-408-777-00	INDUCTOR CHIP 10uH	
		(TRANSISTOR)	
Q101	8-729-805-41	TRANSISTOR 2SC3398	
Q102	8-729-805-42	TRANSISTOR 2SC3859	
Q201	8-729-805-41	TRANSISTOR 2SC3398	
Q202	8-729-805-42	TRANSISTOR 2SC3859	
Q401	8-729-805-65	TRANSISTOR 2SA1344	
Q402	8-729-805-65	TRANSISTOR 2SA1344	
Q403	8-729-602-36	TRANSISTOR 2SA1602	
Q404	8-729-602-36	TRANSISTOR 2SA1602	
Q405	8-729-602-36	TRANSISTOR 2SA1602	
Q406	8-729-602-36	TRANSISTOR 2SA1602	
Q407	8-729-602-21	TRANSISTOR 2SC4154	
Q501	8-729-209-15	TRANSISTOR 2SD2012	
Q502	8-729-111-67	TRANSISTOR 2SB1094	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-602-21	TRANSISTOR 2SC4154	
Q505	8-729-602-21	TRANSISTOR 2SC4154	
Q506	8-729-602-36	TRANSISTOR 2SA1602	
Q601	8-729-805-65	TRANSISTOR 2SA1344	
Q602	8-729-805-65	TRANSISTOR 2SA1344	
Q603	8-729-805-41	TRANSISTOR 2SC3398	
Q604	8-729-805-65	TRANSISTOR 2SA1344	
Q605	8-729-805-69	TRANSISTOR 2SA1341	
Q606	8-729-805-45	TRANSISTOR 2SC3395	
Q607	8-729-805-65	TRANSISTOR 2SA1344	
Q608	8-729-805-65	TRANSISTOR 2SA1344	
Q609	8-729-805-41	TRANSISTOR 2SC3398	
Q611	8-729-805-65	TRANSISTOR 2SA1344	
Q612	8-729-805-41	TRANSISTOR 2SC3398	
Q613	8-729-805-41	TRANSISTOR 2SC3398	
Q616	8-729-804-41	TRANSISTOR 2SB1122-S	
Q617	8-729-804-41	TRANSISTOR 2SB1122-S	
Q619	8-729-808-01	TRANSISTOR 2SD1622-S	
Q620	8-729-808-01	TRANSISTOR 2SD1622-S	
Q6005	8-729-805-41	TRANSISTOR 2SC3398	
		(RESISTOR)	
R101	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R102	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R103	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R104	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R105	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R106	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R107	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R108	1-216-043-00	METAL CHIP 560 5% 1/10W	
R109	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R110	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R111	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R112	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R113	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R114	1-216-068-00	METAL CHIP 6.2K 5% 1/10W	
R115	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R116	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R117	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R118	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R119	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R120	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R121	1-216-295-00	METAL CHIP 0 5% 1/10W	
R201	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R202	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R203	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R204	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R205	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R206	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R207	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R208	1-216-043-00	METAL CHIP 560 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R211	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R212	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R213	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R214	1-216-068-00	METAL CHIP 6.2K 5% 1/10W	
R215	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R216	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R217	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R218	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R219	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R220	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R221	1-216-295-00	METAL CHIP 0 5% 1/10W	
R351	1-216-029-00	METAL CHIP 150 5% 1/10W	
R352	1-216-033-00	METAL CHIP 220 5% 1/10W	
R353	1-216-037-00	METAL CHIP 330 5% 1/10W	
R354	1-216-041-00	METAL CHIP 470 5% 1/10W	
R355	1-216-045-00	METAL CHIP 680 5% 1/10W	
R356	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R357	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R359	1-216-045-00	METAL CHIP 680 5% 1/10W	
R362	1-216-041-00	METAL CHIP 470 5% 1/10W	
R363	1-216-045-00	METAL CHIP 680 5% 1/10W	

Ref. No.	Part No.	Description				Remarks
R364	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R365	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R366	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R367	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R368	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R369	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R372	1-216-041-00	METAL CHIP	470	5%	1/10W	
R374	1-216-041-00	METAL CHIP	470	5%	1/10W	
R375	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R376	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R377	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R378	1-216-025-00	METAL CHIP	100	5%	1/10W	
R379	1-216-025-00	METAL CHIP	100	5%	1/10W	
R380	1-216-025-00	METAL CHIP	100	5%	1/10W	
R381	1-216-025-00	METAL CHIP	100	5%	1/10W	
R401	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R402	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R403	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R404	1-216-041-00	METAL CHIP	470	5%	1/10W	
R405	1-216-041-00	METAL CHIP	470	5%	1/10W	
R407	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R408	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R409	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R410	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R411	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R413	1-216-295-00	METAL CHIP	0	5%	1/10W	
R414	1-216-295-00	METAL CHIP	0	5%	1/10W	
R415	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R417	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R418	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R419	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R420	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R421	1-216-001-00	METAL CHIP	10	5%	1/10W	
R422	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R423	1-216-041-00	METAL CHIP	470	5%	1/10W	
R425	1-216-025-00	METAL CHIP	100	5%	1/10W	
R426	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R427	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R428	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R429	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R430	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R431	1-216-022-00	METAL CHIP	75	5%	1/10W	
R432	1-216-022-00	METAL CHIP	75	5%	1/10W	
R434	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R435	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R436	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R437	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R439	1-216-295-00	METAL CHIP	0	5%	1/10W	
R440	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R441	1-216-295-00	METAL CHIP	0	5%	1/10W	
R442	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R450	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R451	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R452	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R453	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R454	1-216-041-00	METAL CHIP	470	5%	1/10W	
R455	1-216-041-00	METAL CHIP	470	5%	1/10W	
R457	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R458	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R459	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R460	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R461	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R463	1-216-295-00	METAL CHIP	0	5%	1/10W	
R464	1-216-295-00	METAL CHIP	0	5%	1/10W	
R465	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R467	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R468	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R469	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R470	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R471	1-216-001-00	METAL CHIP	10	5%	1/10W	
R472	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R473	1-216-041-00	METAL CHIP	470	5%	1/10W	
R475	1-216-025-00	METAL CHIP	100	5%	1/10W	
R476	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R477	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R478	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R481	1-216-022-00	METAL CHIP	75	5%	1/10W	
R482	1-216-022-00	METAL CHIP	75	5%	1/10W	
R483	1-216-022-00	METAL CHIP	75	5%	1/10W	
R484	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R485	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R486	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R487	1-216-029-00	METAL CHIP	150	5%	1/10W	
R488	1-216-029-00	METAL CHIP	150	5%	1/10W	
R489	1-216-031-00	METAL CHIP	180	5%	1/10W	
R490	1-216-031-00	METAL CHIP	180	5%	1/10W	
R491	1-216-031-00	METAL CHIP	180	5%	1/10W	
R492	1-216-029-00	METAL CHIP	150	5%	1/10W	
R493	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R494	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R495	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R496	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R497	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R499	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R500	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R501	1-216-033-00	METAL CHIP	220	5%	1/10W	
R502	1-216-041-00	METAL CHIP	470	5%	1/10W	
R503	1-216-041-00	METAL CHIP	470	5%	1/10W	
R504	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R505	1-216-089-00	METAL CHIP	47K	5%	1/10W	

MC-Service

MAIN PANEL PIN JACK POWER

Ref. No.	Part No.	Description	Remarks
R601	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R602	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R603	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R605	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R606	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R607	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R608	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R609	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R610	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R611	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R612	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R613	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R614	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R615	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R616	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R617	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R618	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R619	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R620	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R621	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R623	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R624	1-216-295-00	METAL CHIP 0 5% 1/10W	
R625	1-216-295-00	METAL CHIP 0 5% 1/10W	
R626	1-216-295-00	METAL CHIP 0 5% 1/10W	
R628	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R629	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R630	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R631	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R634	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R635	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R636	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R637	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R638	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R639	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R640	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R641	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R642	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R643	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R644	1-216-025-00	METAL CHIP 100 5% 1/10W	
R645	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R646	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R647	1-216-025-00	METAL CHIP 100 5% 1/10W	
R648	1-216-025-00	METAL CHIP 100 5% 1/10W	
R649	1-216-025-00	METAL CHIP 100 5% 1/10W	
R650	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R651	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R652	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R653	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R654	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R655	1-216-121-00	METAL CHIP 1M 5% 1/10W	

Ref. No.	Part No.	Description	Remarks
R656	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R661	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R662	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R663	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R664	1-216-045-00	METAL CHIP 680 5% 1/10W	
R665	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R666	1-216-045-00	METAL CHIP 680 5% 1/10W	
R667	1-216-025-00	METAL CHIP 100 5% 1/10W	
R668	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R669	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R670	1-216-084-00	METAL GLAZE 30K 5% 1/10W	
R671	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R672	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R673	1-216-080-00	METAL CHIP 20K 5% 1/10W	
R674	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R675	1-216-080-00	METAL CHIP 20K 5% 1/10W	
R676	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R677	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R678	1-216-084-00	METAL GLAZE 30K 5% 1/10W	
R679	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R680	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R681	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R682	1-216-025-00	METAL CHIP 100 5% 1/10W	
R686	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R687	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R690	1-216-025-00	METAL CHIP 100 5% 1/10W	
R691	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R692	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R693	1-216-025-00	METAL CHIP 100 5% 1/10W	
R695	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
R696	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R697	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R698	1-216-084-00	METAL GLAZE 30K 5% 1/10W	
R699	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R700	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R5001	1-216-025-00	METAL CHIP 100 5% 1/10W	
R5002	1-216-025-00	METAL CHIP 100 5% 1/10W	
R6001	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R6004	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R6005	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R6010	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R6011	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6012	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6013	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6014	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6015	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6016	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6017	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6018	1-216-298-00	METAL CHIP 2.2 5% 1/10W	

Ref. No.	Part No.	Description	Remarks
		(VARIABLE RESISTOR)	
RV101	1-238-547-11	RES, ADJ, CARBON 10K	
RV201	1-238-547-11	RES, ADJ, CARBON 10K	
		(SWITCH)	
S901	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)	
S902	1-554-303-21	SWITCH, TACTILE (◀◀)	
S903	1-554-303-21	SWITCH, TACTILE (▶▶)	
S904	1-554-303-21	SWITCH, TACTILE (● REC)	
S905	1-554-303-21	SWITCH, TACTILE (DECK A)	
S906	1-554-303-21	SWITCH, TACTILE (DECK B)	
S907	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)	
S908	1-554-303-21	SWITCH, TACTILE (DOLBY NR)	
S909	1-554-303-21	SWITCH, TACTILE (DUBBING MODE)	
S910	1-554-303-21	SWITCH, TACTILE (■)	
S911	1-554-303-21	SWITCH, TACTILE (◁)	
S912	1-554-303-21	SWITCH, TACTILE (▷)	
S913	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)	
S914	1-554-303-21	SWITCH, TACTILE (○ MUTE)	
S915	1-554-303-21	SWITCH, TACTILE (DIRECTION MODE)	
		(TRANSFORMER)	
T601	1-450-458-11	TRANSFORMER, DC-DC CONVERTER	
		(TEST PIN)	
TP601	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
TP6001	* 1-564-517-11	PLUG, CONNECTOR 2P	
		(CRYSTAL)	
X401	1-577-077-11	OSCILLATOR, CERAMIC 400kHz	
X601	1-577-358-21	VIBRATOR, CERAMIC 4MHz	
X951	1-577-101-11	VIBRATOR, CERAMIC 4.19MHz	

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Ref. No.	Part No.	Description				Remarks
	* 1-634-841-11	LEAF SW(A) BOARD ****************				
	3-343-419-01	HOLDER (S SENSER A)				
		(CONNECTOR)				
CNP81	* 1-568-852-11	SOCKET, CONNECTOR 9P				
		(IC)				
IC81A	8-719-710-03	IC PHOTO REFLECTOR NJL5165K-B				
		(RESISTOR)				
R84	1-249-417-11	CARBON	1K	5%	1/4W	
R85	1-249-408-11	CARBON	180	5%	1/4W	
		(SWITCH)				
S81	1-571-958-11	SWITCH, PUSH (1 KEY)(A.STOP DET)				
S82	1-571-281-21	SWITCH, LEAF (A.CrO2 DET)				
S86	1-571-281-21	SWITCH, LEAF (A.HALF DET)				

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Ref. No.	Part No.	Description				Remarks
	* A-2006-399-A	MD-A BOARD **********				
		(CAPACITOR)				
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C12	1-136-157-00	FILM	0.022uF	5%	50V	
C13	1-124-234-00	ELECT	22uF	20%	16V	
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C22	1-136-157-00	FILM	0.022uF	5%	50V	
C23	1-124-234-00	ELECT	22uF	20%	16V	
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C31	1-124-234-00	ELECT	22uF	20%	16V	
C32	1-124-234-00	ELECT	22uF	20%	16V	
C71	1-164-346-11	CERAMIC CHIP	1uF		16V	
		(CONNECTOR)				
CNJ31	* 1-580-782-11	CONNECTOR, BOARD TO BOARD				
CNP32	* 1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P				
CNP71	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P				
CNP72	* 1-580-411-11	SOCKET, CONNECTOR 4P				
		(IC)				
IC31A	8-759-970-66	IC LM833M				
		(JUMPER)				
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW51	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W	
		(TRANSISTOR)				
Q71A	8-729-602-36	TRANSISTOR 2SA1602				
		(RESISTOR)				
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R12	1-216-025-00	METAL CHIP	100	5%	1/10W	
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W	
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W	

MC-Service

MD-A LEAF SW(B) MD-B HX PRO

Ref. No.	Part No.	Description	Remarks
R22	1-216-025-00	METAL CHIP 100 5% 1/10W	
R23	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R24	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R31	1-216-033-00	METAL CHIP 220 5% 1/10W	
R32	1-216-033-00	METAL CHIP 220 5% 1/10W	
R71	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R72	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R73	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R74	1-216-089-00	METAL CHIP 47K 5% 1/10W	
		(VARIABLE RESISTOR)	
RV11A	1-238-012-11	RES, ADJ, CARBON 1K	
RV21A	1-238-012-11	RES, ADJ, CARBON 1K	
RV71A	1-238-016-11	RES, ADJ, CARBON 10K	
RV72A	1-238-016-11	RES, ADJ, CARBON 10K	

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Ref. No.	Part No.	Description	Remarks
	* 1-634-841-11	LEAF SW(B) BOARD ****************	
	3-343-419-01	HOLDER (S SENSER A)	
		(CONNECTOR)	
CNP81	* 1-568-852-11	SOCKET, CONNECTOR 9P	
		(IC)	
IC81B	8-719-710-03	IC PHOTO REFLECTOR NJL5165K-B	
		(RESISTOR)	
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		(SWITCH)	
S81	1-571-958-11	SWITCH, PUSH (1 KEY)(B.STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (B.CrO2 DET)	
S83	1-571-281-21	SWITCH, LEAF (B.METAL DET)	
S84	1-571-281-21	SWITCH, LEAF (B.ERASE PROOF SIDE A)	
S85	1-571-281-21	SWITCH, LEAF (B.ERASE PROOF SIDE B)	
S86	1-571-281-21	SWITCH, LEAF (B.HALF DET)	

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Ref. No.	Part No.	Description	Remarks
	* A-2006-401-A	MD-B HX PRO BOARD ****************	
		(CAPACITOR)	
C11	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C12	1-136-157-00	FILM 0.022uF 5% 50V	
C13	1-124-234-00	ELECT 22uF 20% 16V	
C18	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C21	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C22	1-136-157-00	FILM 0.022uF 5% 50V	
C23	1-124-234-00	ELECT 22uF 20% 16V	
C28	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C31	1-124-234-00	ELECT 22uF 20% 16V	
C32	1-124-234-00	ELECT 22uF 20% 16V	
C33	1-124-234-00	ELECT 22uF 20% 16V	
C51	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C52	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C53	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
C54	1-136-601-11	FILM 0.01uF 5% 630V	
C56	1-164-505-11	CERAMIC CHIP 2.2uF 16V	
C57	1-164-346-11	CERAMIC CHIP 1uF 16V	
C71	1-164-346-11	CERAMIC CHIP 1uF 16V	
C80	1-124-234-00	ELECT 22uF 20% 16V	
C81	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C82	1-136-157-00	FILM 0.022uF 5% 50V	
C83	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C84	1-136-437-11	FILM 220PF 5% 630V	
C85	1-136-433-11	FILM 100PF 5% 630V	
C86	1-163-143-00	CERAMIC CHIP 0.0012uF 5% 50V	
C87	1-136-273-91	FILM 75PF 5% 630V	
C88	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C89	1-124-234-00	ELECT 22uF 20% 16V	
C90	1-107-045-00	MICA 3.9PF 500V	
C91	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C92	1-136-157-00	FILM 0.022uF 5% 50V	
C93	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C94	1-136-437-11	FILM 220PF 5% 630V	
C95	1-136-433-11	FILM 100PF 5% 630V	
C96	1-163-143-00	CERAMIC CHIP 0.0012uF 5% 50V	
C97	1-136-273-91	FILM 75PF 5% 630V	
C98	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C99	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
		(CONNECTOR)	
CNP31	* 1-580-782-11	CONNECTOR, BOARD TO BOARD	
CNP32	* 1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P	
CNP33	* 1-580-782-11	CONNECTOR, BOARD TO BOARD	
CNP71	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP72	* 1-580-411-11	SOCKET, CONNECTOR 4P	

MD-B HX PRO

Ref. No.	Part No.	Description	Remarks
		(DIODE)	
D31	8-719-988-62	DIODE 1SS355	
		(IC)	
IC31B	8-759-970-66	IC LM833M	
IC81	8-759-106-56	IC uPC1297CA	
		(COIL)	
L81	1-410-780-11	INDUCTOR 27mH	
L91	1-410-780-11	INDUCTOR 27mH	
		(TRANSISTOR)	
Q51	8-729-808-01	TRANSISTOR 2SD1622	
Q52	8-729-808-01	TRANSISTOR 2SD1622	
Q53	8-729-808-01	TRANSISTOR 2SD1622	
Q71B	8-729-216-22	TRANSISTOR 2SA1162	
		(RESISTOR)	
R11	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R12	1-216-025-00	METAL CHIP 100 5% 1/10W	
R13	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R14	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R21	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R22	1-216-025-00	METAL CHIP 100 5% 1/10W	
R23	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R24	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R31	1-216-033-00	METAL CHIP 220 5% 1/10W	
R32	1-216-033-00	METAL CHIP 220 5% 1/10W	
R51	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R52	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R53	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R54	1-216-309-00	METAL CHIP 5.6 5% 1/10W	
R55	1-216-309-00	METAL CHIP 5.6 5% 1/10W	
R57	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R71	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R72	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R73	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R74	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R81	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R82	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R83	1-216-001-00	METAL CHIP 10 5% 1/10W	
R84	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R85	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R91	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R92	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R93	1-216-001-00	METAL CHIP 10 5% 1/10W	
R94	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R95	1-216-075-00	METAL CHIP 12K 5% 1/10W	

Ref. No.	Part No.	Description	Remarks
		(VARIABLE RESISTOR)	
RV11B	1-238-012-11	RES, ADJ, CARBON 1K	
RV21B	1-238-012-11	RES, ADJ, CARBON 1K	
RV71B	1-238-016-11	RES, ADJ, CARBON 10K	
RV72B	1-238-016-11	RES, ADJ, CARBON 10K	
RV81	1-238-548-11	RES, ADJ, CARBON 22K	
RV91	1-238-548-11	RES, ADJ, CARBON 22K	
		(RELAY)	
RY31	1-515-726-11	RELAY	
		(COIL)	
T51	1-406-417-11	COIL, BIAS OSCILLATION	
T81	1-433-367-11	TRANSFORMER, BIAS OSSCILATION	
T91	1-433-367-11	TRANSFORMER, BIAS OSSCILATION	
		(TEST PIN)	
TP81	* 1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P	

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MISCELLANEOUS
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Ref. No.	Part No.	Description
117	1-638-983-11	PC BOARD, MOTOR FLEXIBLE
HP101	A-2003-868-A	BASE ASSY, HEAD (DECK A)
HRP101	A-2003-838-A	BASE ASSY, HEAD (DECK B)
M101A	A-2003-474-A	MOTOR (REEL MOTOR) ASSY (DECK A)
M101B	A-2003-474-A	MOTOR (REEL MOTOR) ASSY (DECK B)
M102A	X-3359-417-1	MOTOR (CAPSTAN MOTOR) ASSY (DECK A)
M102B	X-3359-417-1	MOTOR (CAPSTAN MOTOR) ASSY (DECK B)

****

HARDWARE LIST

****

Ref. No.	Part No.	Description
# 1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
# 2	7-621-255-15	SCREW +PTT 2X3 (S)
# 3	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
# 4	7-621-770-67	SCREW +PTT 2.6X6 (S)
# 5	7-627-556-08	SCREW +P 2.6X2.8
# 6	7-621-775-00	SCREW +B 2.6X3
# 7	7-682-548-04	+BVTT 3X8 (S)

TC-H6600

SONY

SERVICE MANUAL

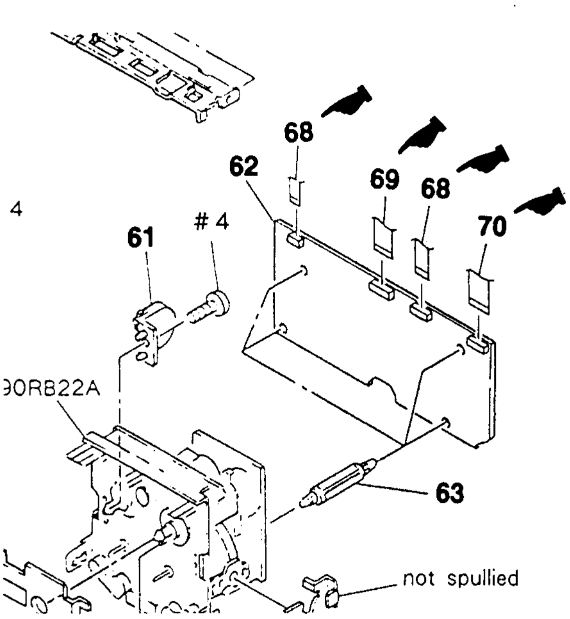
AEP Model
UK Model

CORRECTION-1

Correct your service manual as shown below.

Subject: Addition of new parts Exploded Views “Front panel Section-2.

☛ **:Location of newly added parts.**

<table>
<tr><th>Page</th><th>exploded views</th><th>parts list</th></tr>
<tr><td>38</td><td> </td><td><table>
<tr><th>No.</th><th>Part No.</th><th>Description</th><th>Remaks</th></tr>
<tr><td>68</td><td>1-590-902-11</td><td>9CONDUCTOR FLAT CABLE</td><td></td></tr>
<tr><td>69</td><td>1-590-904-11</td><td>12CONDUCTOR FLAT CABLE</td><td></td></tr>
<tr><td>70</td><td>1-590-903-11</td><td>15CONDUCTOR FLAT CABLE</td><td></td></tr>
</table></td></tr>
</table>

9-956-359-91

Sony Corporation
Audio Group

English
92H1 661-1
Printed in Japan
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Published by Customer Relations and Service Group

SS-H6600

SERVICE MANUAL

AEP Model
UK Model
E Model

SPECIFICATIONS

Speaker system 3-way, 4-box type

Satellite unit

Speaker units	Mid-range: 8cm(3 in.) cone type Tweeter: 2cm($^{13}/_{16}$in.) soft dome type
Power handling capacity	Maximum input power 50W
Sensitivity	89 dB/W/m
Effective frequency range	200-20,000 Hz
Rated impedance	8 ohms
Dimensions	Approx. 185x115x220mm(w/h/d) ($7^3/_8$ x $4^5/_8$ x $8^3/_4$ in.)
Weight	Approx. 1.7 kg (3 lb 12 oz)

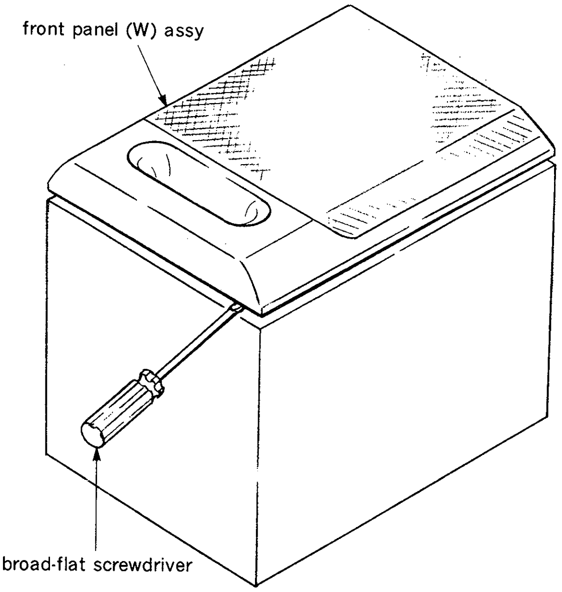
Bass unit

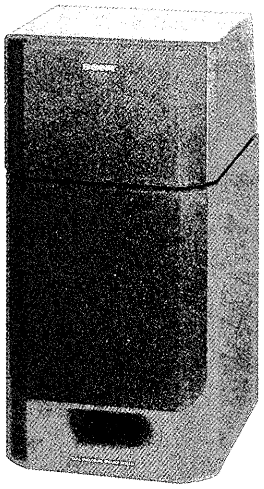
Speaker unit	Woofer: 15cm(6 in.) cone type
Power handling capacity	Maximum input power 70W
Sensitivity	89 dB/W/m
Effective frequency range	40-200 Hz
Rated impedance	6 ohms
Dimensions	Approx. 185x250x220mm(w/h/d) ($7^3/_8$ x $9^7/_8$ x $8^3/_4$ in.)
Weight	Approx. 4.1 kg (9 lb 1 oz)

Design and specifications subject to change without notice.

1. FRONT PANEL (W) ASSY REMOVAL

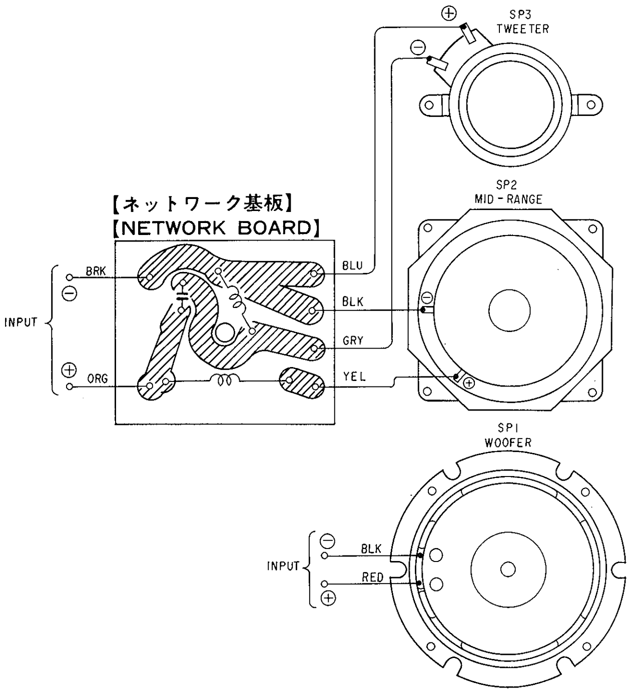
Note : Be careful not to scratch the cabinet.


front panel (W) assy
broad-flat screwdriver



This set is the speaker system in MHC-5600, MHC-6600, FH-E939CD, and FH-E949CD.

2. WIRING DIAGRAM


⊕
⊖
SP3
TWEETER
SP2
MID - RANGE
【ネットワーク基板】
【NETWORK BOARD】
BRK
⊖
INPUT
⊕
ORG
BLU
BLK
GRY
YEL
SP1
WOOFER
⊖
INPUT
BLK
RED
⊕

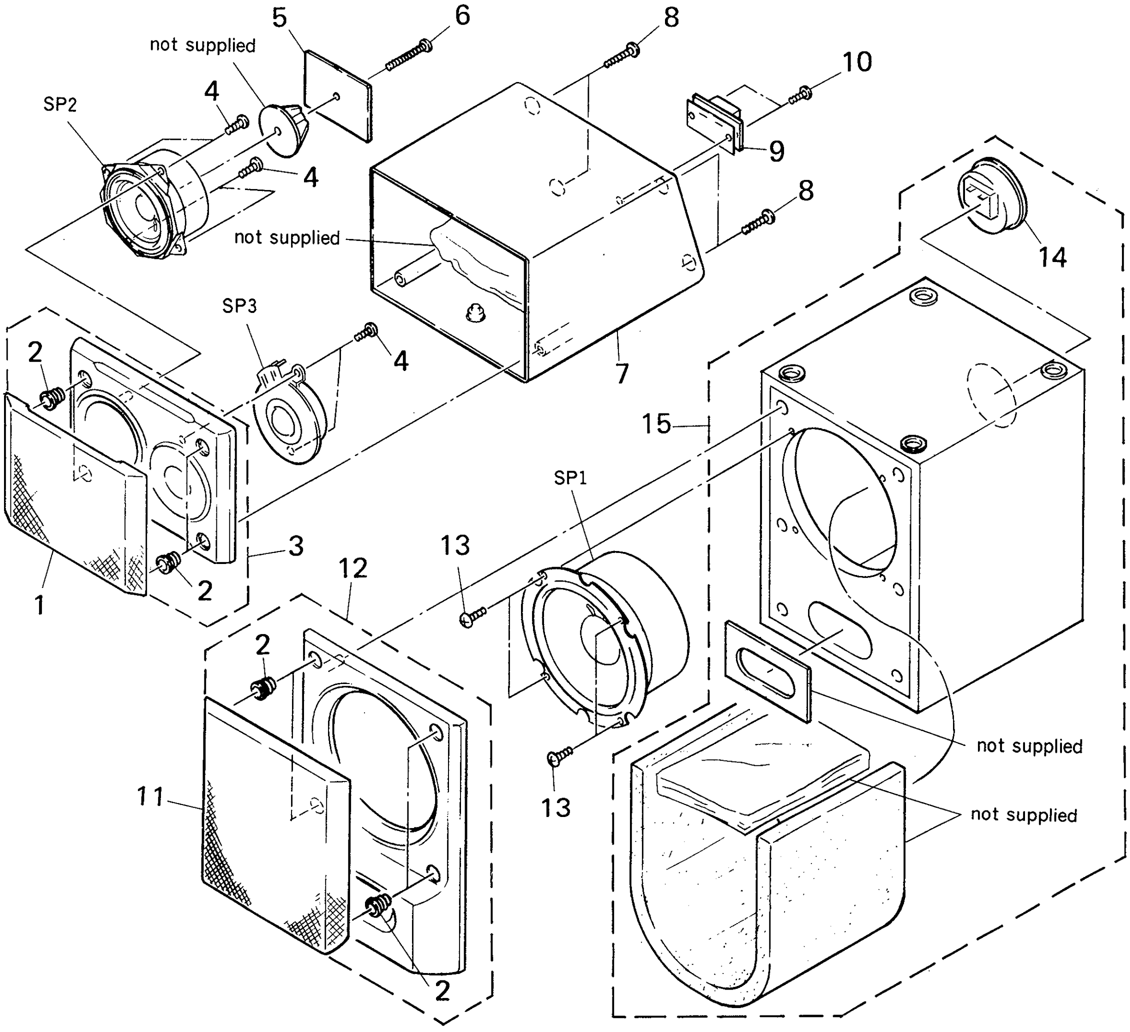
SPEAKER SYSTEM

SONY®

3. EXPLODED VIEW AND PARTS LIST

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color



Ref.No	Part No.	Description	Remarks
1	X-4941-269-1	FRAME (S) ASSY, GRILLE	
2	∗4-912-253-01	CATCHER	
3	X-4941-370-1	PANEL (S) ASSY, FRONT	
4	7-685-660-79	SCREW +BVTP 4×10 TYPE2 IT-3	
5	∗1-589-323-11	MOUNTED PC BOARD (NETWORK)	
6	7-685-878-01	SCREW +BVTT 3×25 (S)	
7	X-4941-270-1	CABINET (S) ASSY, SPEAKER	
8	7-685-663-79	SCREW +BVTP 4×16 TYPE2 IT-3	
9	1-537-337-31	TERMINAL BOARD (2P SP)	
10	7-685-647-79	SCREW +BVTP 3×10 TYPE2 N-S	

Ref.No	Part No.	Description	Remarks
11	X-4941-271-1	FRAME (W) ASSY, GRILLE	
12	X-4941-439-2	PANEL (W) ASSY, FRONT	
13	4-874-614-11	SCREW (4) (3.5×14), TAPPING	
14	1-537-145-11	TERMINAL BOARD (SPEAKER)	
15	X-4941-398-1	CABINET (W) ASSY, SPEAKER (AEP, UK, E)	
15	X-4941-399-1	CABINET (W) ASSY, SPEAKER (Germany)	
SP1	1-544-434-21	SPEAKER (15CM)	
SP2	1-544-433-11	SPEAKER (8CM)	
SP3	1-544-432-11	SPEAKER (2.5CM)	

ACCESSORY&PACKING MATERIAL
****

Ref.No	Part No.	Description	Remarks
	1-590-855-11	CORD, SPEAKER (AEP, Germany)	
	3-753-188-11	MANUAL, INSTRUCTION (AEP, Germany)	
	3-694-922-01	SHEET, PROTECTION	

English
91C0469-1
Printed in Japan

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